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MONTHLY REPORT

OF

THE AGRICULTURAL DEPARTMENT.

MAY AND JUNE,

1867.

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1867.

MONTHLY REPORT.

DEATH OF HON. ISAAC NEWTON.

After this report was sent to press, we received the news that our worthy Commissioner had passed away to that world where "the wicked cease from troubling and the weary be at rest." We have room only for a brief notice of his long and useful life, and his peaceful death.

Isaac Newton was born in Burlington county, New Jersey, March 31, 1800. His early years were passed on a farm; his education and his youthful labors were those of a farmer's boy. He was a member of the Society of Friends, a respectable and highly valued member, cherishing the faith and living the profession of his people.

Shortly after his marriage he settled on a farm in Delaware county, Pennsylvania, not far from Philadelphia. His management soon made his farm celebrated for its neatness, order, and productiveness; and he early took place in the front rank of the model farmers of the Keystone State. At an early period he became a member of the State Agricultural Society, and in it offered a resolution, which was adopted, urging Congress to establish a national Department of Agriculture. He also was among the first to press this measure on the attention of Presidents Harrison, Taylor, and Fillmore, with whom he enjoyed intimate personal acquaintance. Finally, on the election of Mr. Lincoln, he again urged this measure, and Congress responded to the President's recommendation by passing the long desired act, which was approved May 15, 1862.

In anticipation of such a department, Mr. Lincoln, in the spring of 1861, appointed Mr. Newton to superintend the agricultural division of the Bureau of Patents; which he did so satisfactorily, that when the act was passed, Mr. Lincoln appointed and the Senate confirmed him as the suitable person to organize and preside over the new department, as its Commissioner.

Thus this department was inaugurated July 1, 1862, as a separate and independent department of our government; and it is a noteworthy fact that our martyr President, to the close of his life, gave the Commissioner his confidence and warm approval, and frequently consulted him as an intimate personal friend.

In July, 1866, Mr. Newton overheated himself while working on the experimental farm. He was became dangerously ill; and, in consequence of pressing cares and duties, did not allow himself leisure for full recovery. Frequent relapses followed, attended by complicating affections of various organs, until the over-wrought organism finally failed altogether. He quietly, peacefully, and in full consciousness, passed from this life at the house of his son, Isaac Newton, jr., in this city, at about 6 p. m., June 19, 1867.

This is not the time, nor have we space, to add more respecting the departed, or his official life and labors. The latter were numerous, exacting and often very difficult; but we believe that results will prove that they were generally judiciously devised, well performed, and will be found highly beneficial to the country at large. The accompanying resolutions will show in what light the deceased and his official deeds were regarded by those associated with him in the department. His fellow-citizens of Pennsylvania, temporarily residing here, have also voluntarily expressed their sentiments in regard to him as a man and as a public officer. We feel, therefore, that with such "a cloud of witnesses," we may properly close without further comment on his well-spent life and honorable character.

J. W. STOKES,
Acting Commissioner.

MEETING OF DEPARTMENT EMPLOYÉS.

At a meeting of the clerks and employés of the Department of Agriculture, held Thursday morning, June 20, to take action upon the decease of Hon. Isaac Newton, late Commissioner of Agriculture, Hon. John W. Stokes, Acting Commissioner, was called to the chair, and Charles H. Folwell appointed secretary.

Upon taking the chair Mr. Stokes said:

GENTLEMEN: It becomes my painful duty to announce to you the death of Mr. Newton, the head of this Department. He expired yesterday at his residence in this city, surrounded by his family and friends.

We meet together, gentlemen, to-day, to express, in a suitable and becoming manner, our feelings upon this sad bereavement. Many of you have been associated with him in the discharge of the duties of the Department from its organization, and have been the recipients of his kind and generous confidence. You are the living witnesses of his earnest and devoted attachment to the great agricultural interests of the country, and of the industry with which he ever pursued the labors of his office. Personally, I feel this bereavement keenly; he was my personal friend, and for many years I have enjoyed his confidence as his personal friend and legal adviser, and twice have I been honored by him in the position which I hold among you to-day, which makes me the successor and temporary occupant of that vacant chair until it shall be again filled by regular appointment.

On motion of Colonel E. M. Whitaker, a committee of three, consisting of Rev. A. B. Grosh, J. R. Dodge, and Wm. Saunders, was appointed to draught resolutions expressive of the feelings of the meeting.

During the absence of the committee, Colonel E. M. Whitaker, Walter E. Gardiner, and Colonel James Gleason were appointed a committee to make necessary arrangements for the funeral, and a committee of twenty was appointed to accompany the remains to Philadelphia.

Mr. Grosh, from the committee on resolutions, said they felt so deeply this sad affliction that it required much effort to suppress what they would say, lest more would be said than seemed proper. We have been associated with Mr. Newton for years—some of us before this Department was organized—and have shared his arduous labors, and sympathized with him in his many trials—received his kindnesses and met his approving smiles; and when we look at his now vacant chair, and recall his benevolent countenance, and realize that the seat shall no more be filled by his noble form, crowned by those silvery locks of an honored old age, we feel that the words are tame in which we have en-

deavored to express our and your feeling of the common loss. But we have endeavored to make them fit, though few, and appropriate, though not overflowing, nor even full of our emotions on this sad occurrence. And as such we respectfully submit the following:

Whereas we have heard with profound sorrow of the death of the Hon. Isaac Newton, the first Commissioner of this Department, and deem it proper that we, who shared his confidence and his labors, and reciprocated his kindly feelings, should express our sentiments on the sad occasion: Therefore,

Resolved, That in the decease of Hon. Isaac Newton the nation has been deprived of a humane, honest, and efficient officer; this Department of one who, at an early day, urged its establishment as due to the agricultural interests of the country, and who, in all the preparatory labors for originating and organizing the Department and in directing its operations, had the full, unwavering confidence and approbation, as well as warm personal friendship, of our martyr President.

Resolved, That the agricultural associations of which he was a member, and the agriculturists of our country generally, have been deprived of an eminently able and practical member, who, through a long life devoted to their interests, proved himself an honor to that most honorable profession.

Resolved, That we who knew him so well, and esteemed and loved him so much, mingle our griefs and sympathies with his bereaved family and numerous friends who knew him best and therefore loved him most, and feelingly commend them to the comforts and consolations of that religious faith which was his guide, support, and consolation in the many duties, trials, and afflictions of his long, active, and useful life—confident that He who has taken away our friend chastens only "for our profit that we might be partakers of His holiness."

Resolved, That to show our regard for the deceased, and our respect for his memory, we will attend his funeral in a body, and wear the usual badge of mourning for thirty days.

The preamble and resolutions were adopted, and a committee of five appointed to present a copy of the same to the family of the deceased.

The proceedings of the meeting were ordered to be published, and the meeting then adjourned to meet at one p. m., June 21, to attend in a body the remains from the late residence of the Commissioner to the Baltimore depot.

JOHN W. STOKES, *Chairman.*

CHARLES H. FOLWELL, *Secretary.*

MEETING OF PENNSYLVANIANS.

A meeting of Pennsylvanians was held on the evening of June 20, at the State Agency, and the following resolutions were adopted:

Whereas it has pleased an all-wise Providence to remove from the scene of his honorable and useful labors a prominent citizen of Pennsylvania, the Hon. Isaac Newton, Commissioner of Agriculture—a man honorable for years, of unswerving loyalty, of scrupulous integrity, of genial disposition, of pure and simple habits, a devotee of the noble pursuit of agriculture, a cherished friend of the late President Lincoln, and a recipient of merited honors at his hands: Therefore,

Resolved, That in the death of the Hon. Isaac Newton, we mourn the loss of an upright citizen and a faithful officer, who both in private and public life reflected honor upon the gallant State of his birth, and the noble State of which he was a citizen.

Resolved, That by this afflicting dispensation the honorable calling of agriculture has lost one of its brightest ornaments—one whose life was consecrated to the development of its vast resources, and to the promotion of its important interests.

Resolved, That our heartfelt sympathies are hereby tendered to the sorrowing family of the lamented deceased, with the expression of the fervent hope that He who in His inscrutable dispensations has permitted this great bereavement, will assuage the anguish of their stricken hearts.

Resolved, That as an additional testimonial of our admiration of the virtues and respect for the memory of our departed friend, we will attend his funeral in a body.

Resolved, That the newspapers of the District of Columbia and of the States of Pennsylvania and New Jersey be requested to publish the proceedings of this meeting, and that a copy of the foregoing preamble and resolutions be transmitted by its officers to the bereaved family of the venerable deceased.

The following gentlemen representing the various departments of the government were appointed to act as pall-bearers to the railroad depot: Colonel John H. Stewart, State Agent; General James A. Ekin, War Department; Dr. Thomas L. Cathcart, Treasury Department; Joseph M. Wilson, Interior Department; A. D. Hazen, Post Office Department; John D. Hyer, Navy Department; A. B. Grosh and Colonel James Gleason, Department of Agriculture.

REPORT OF AN AGRICULTURAL SURVEY OF THE SOUTH.

WASHINGTON, *June* 1, 1867.

SIR: The undersigned, commissioned by you as an agent of the department to travel in the southern States and make arrangements for the distribution of seeds to the destitute in the south, in order to carry out the intentions of Congress in an act entitled "A resolution for the relief of the destitute in the south and southwestern States," approved March 30, 1867, begs leave to submit the following report:

I left this city on the 12th of April; proceeded to Richmond, in Virginia; thence to Petersburg, and via Weldon and Wilmington, North Carolina, to Charleston, South Carolina; thence I proceeded to Augusta and to Savannah, Georgia; thence to Macon and Atlanta; thence to Chattanooga, Tennessee, to Tuscumbia, Alabama, and to Memphis, Tennessee; at that point, by the Mississippi river to Vicksburg, Mississippi; thence to Jackson, and thence to New Orleans, in Louisiana; thence to Mobile and Montgomery, in Alabama; thence, via Columbus, to Macon and Atlanta; and thence to Dalton, Georgia, and from there, via Knoxville, Tennessee, and Lynchburg, Virginia, back to this city, where I arrived on the 31st ultimo.

I had previously visited, during February and March, part of the section traversed, by different routes, having visited Raleigh, North Carolina, and Charlotte and Columbia, South Carolina, thus traversing in the past four months a large portion of the southern States east of the Mississippi river.

Through the kindness of General Grant I was put in friendly communication with the several district commanders of the southern States, who furnished valuable aid in organizing agencies in the several registering and voting districts throughout their several departments. In Virginia only has the plan been completed. Thanks are due to General Schofield for having so early carried out the views of the department in his district.

You requested me at parting too keep "my eyes and ears open," and to be able to report what I might see and learn in regard to the general condition of the agriculture of the South which might be useful and interesting. I have, in part, endeavored to give you a brief sketch of what I have learned in my short visit to the South, and which I am sensible is only a summary; still, I trust there may be much that will interest the public in reading, as there was certainly much that was exceedingly interesting to me in seeing.

To the mass of the northern people—by which I mean of the free States before the rebellion—but little is known of the agricultural resources of the South. In Europe the people fail to comprehend in the slightest degree the vast field which is there opened up for the future home of the emigrant. While slavery existed the South was as a sealed book to the industry and enterprise of the North. Free labor could not penetrate, and hence the great current of northern and European emigration would not seek an entrance into a country where it was not wanted or tolerated.

But slavery having been abolished, there is a vacuum created for labor so large that a million of laboring people would now find profitable employment; and when the southern people have once mustered a supply of provisions for their own use and to feed the emigrant, means should be taken by the general government or by the States to inaugurate a broad system of emigration.

The effective labor of the South has been reduced to such an extent that careful and experienced men estimate it at one-fourth what it was before the war. My own observation satisfies me that it is less than one-third. There are, therefore, large quantities of land already opened up or cleared and fenced which cannot be cultivated, and is fast growing up with brush and briers for the want of labor.

Few understand the variety of climate, soil, and production of the South. Its production includes those of the temperate and torid zones. All the cereals can be grown there as well as at the North, while oranges, bananas, figs, in addition to most of the fruits of the North, abound. In addition to the cereals, cotton is grown everywhere. I have seen on the same farm cotton, corn, wheat, oats, rye, and red clover, all looking well; the clover was nearly past bloom, and the wheat almost ready for the harvest.

When these facts are understood, and that it is a mistake to suppose a northern man or a European cannot enjoy health at the South, as a general rule, immigration must flow that way; and as the country becomes better understood and appreciated it will teem with a thrifty and industrious population. There are portions of the South where a northern man ought not to settle at present. Around the swamps and rivers and near the coast there are seasons when it would be necessary to adopt great precautions, but it is only a small belt of country—say some fifty or sixty miles wide from the James river, in Virginia, to the Mississippi. To this again are many exceptions, as along the coast as healthy points are found as any in the Union. But however interesting these subjects may be, it is not the place to discuss them in this report.

I found everywhere a want of means and a scarcity of labor to adequately cultivate the land which was already open for tillage. Comparatively few had been able to borrow the means to purchase mules and to feed and pay a few laborers. The difficulty of procuring the means of living for man or beast over the whole South can scarcely be conceived by other than an eye-witness. The war had absorbed or destroyed nearly all the domestic animals, as well as every species of breadstuffs. A bad season had followed the war. There had been no money left, and nothing to get it with. The people, therefore, commenced the year with empty granaries and larders; still, they were trying every means to prepare for making a crop. Few through the Carolinas and a part of Georgia, Alabama, and Mississippi could get teams for any amount of work. Some could get a cow or a steer, which was harnessed to the plough; and it was not uncommon among the poorer families to find the cow doing double duty—furnishing milk to keep the family from starving, and ploughing the land for a crop. Many planters who had teams and the means to put in a good breadth of land to corn or cotton, but not enough to work it beyond a certain point, went forward manfully, trusting to some future supply, though they knew not from what source it would come. Many of these people have been compelled to discharge their laborers, turn their mules into the woods, and abandon promising

crops of corn and cotton, simply for the want of food. Thousands of acres have been thus abandoned, and thousands will yet be, for the famine is yet rife in the land, and this very loss of crop has entailed another year of suffering upon all classes of the rural population of the South.

In point of fact the people were in a worse condition this spring than they were when the war closed. There was money then in the hands of a portion of the people; our army had left some; others had cotton to sell, so that there was some money in circulation. This spring, however, most of that money had left the country, and a failure of the crops the past year had left them badly in debt, and in a most helpless condition. They have, therefore, already anticipated much of their coming crop, and it is doubtful whether at the end of the year, as a whole, they will be better situated financially than they were two years ago.

The defective system of their agriculture has been strongly exemplified this year. Millions of dollars have been sent to Tennessee, Kentucky, and the western States, for corn, bacon, hay, and oats, all of which articles, except bacon, could have been produced equally well on the farm. It is a grave mistake to think that hay cannot be made at the south, or that forage crops are unprofitable. Nearly all the grasses which flourish at the north will do equally well there, if properly cultivated. The quack grass, which is so much dreaded north, has proved itself very useful here, making a permanent sod, and being productive as a pasture grass. The Bermuda grass is invaluable for pasture; and though, from their very superficial method of cultivation, it becomes a pest in cotton fields, if it were more extensively sown in abandoned and worn-out lands, thousands of domestic animals could find support where only barren and desolate fields are now to be seen. Had the North pursued the same wasteful methods of cultivation which have prevailed at the south, there would be many unsightly worn-out fields where there are now smiling homesteads. The vegetable matter of the South, if properly conserved, would be truly enormous.

At Macon, Georgia, on the 2d of May, I saw lucerne that had been cut the second time, (nearly two feet long,) and red clover, orchard grass, blue grass, in blossom, that would have made at least a ton and a half of hay to the acre. On the Mississippi bottom, and indeed upon all intervale lands, white clover grows in luxuriant profusion.

There is therefore little land where an abundance of forage for stock may not be made cheaply; nor is there any where an ample supply of green food could not be grown for soiling the working animals during the spring and summer. I have seen no country where I thought soiling would pay so well, and it should be universally adopted as in the cotton and sugar zone of the South; for there, especially upon their lighter and thinner uplands, "the pine lands," as they are called, vegetable manure is of the utmost value towards securing a good crop, either of corn or cotton. The great cause of the exhaustion of those lands has been the loss of the vegetable matter of the soil. Nothing but an alluvion, often replenished by the overflow of the river, could withstand the terrible process of cultivation which has so long obtained at the south. Land and labor being plenty, and cheap, the plan has been to open new fields constantly, and as fast as the old ones ceased to make remunerative returns, to abandon them and resort to the new ones. It cost more to conserve manures than to clear lands. Hence one sees few conveniences for keeping domestic animals.

That a rigid system of high farming will become profitable I have no doubt. In many instances I found farmers who had saved the manure of their animals after a fashion, yarding their stock in rail pens without cover, then scraping up the litter, much soaked and washed by the winter and spring rains, and carrying it out upon their corn and cotton fields. Some few farmers have good barns and sheds, and their manure is well handled, and applied in good condition, and at the proper time. From these men I learned that by a proper rotation of crops,

and a free use of manures and fertilizers, in favorable years a bale of cotton per acre could be made even on what are called the poor pine lands of the Carolinas and Georgia. For the want, however, of skilful cultivators, millions of acres will remain waste, worse even than the native forest. They have no longer the labor which has been so long and so foolishly turned to wasteful and improvident farming.

Before entering into detail as to the several States it may be well to say that the testimony of the planters over all parts of the south has been that by reason of the severity of the winter the earth was in finer condition for spring labor; that the crops were seeded in finer beds, and had been better worked, and had a better stand than had been known for years. Up to this time there has been little destruction from insects, and great confidence is felt that they will realize abundant crops for the breadth of land cultivated, which, probably, will not exceed in the aggregate one-half the amount before the war.

Having given a brief summary of the South as it appeared in early spring, and observations upon facts then brought to my mind, I shall now give in detail, by States and crops, the appearance up to this 1st of June—an important period of seed time and early cultivation having passed.

VIRGINIA.

But a small part of the cotton belt is found in Virginia. A few counties in the southeastern corner, south of the James river, and along the North Carolina line, embrace all the available cotton lands in the State. Only 12,727 bales are reported for 1860. These lands have been worked to a much larger extent than last year. The seed has been bedded in better order; more manure and fertilizers have been used; the plant has generally been well worked out, and presents a most promising stand. As compared with last year, the breadth seeded is nearly double, but as compared with the year before the war it is not one-half.

The want of means both for paying hands and supporting the working force of the plantation in food and forage has been the great drawback.

Tobacco is the great commercial staple of this State, 123,968,312 pounds being reported by the United States census of 1860. The breadth of land planted has been largely increased this year. Labor has become more reliable, the price of the product makes it profitable to cultivate, and it has long been a favorite staple. Its successful cultivation is practically better understood than in any other State except, perhaps, Kentucky; and there the Virginia method is more or less followed.

While the quantity of land planted is still very much below that of the year before the war, yet, compared with last year it must be more than double. The season thus far has been favorable, and the plant has a good stand.

Wheat.—Owing to the scarcity of seed only a moderate breadth was seeded last fall. But it is now looking uncommonly fine. It has escaped nearly all accidents of insects and weather, and promises one of the largest acreable yields for years. The crop will be unusually good both in quantity and quality.

Corn.—The continued high price of this grain, of which there was quite a surplus in the State, has stimulated the planting of a larger breadth than last spring. Much of the districted lands have been fenced and planted, and this State is rapidly getting back to her condition before the war. The plant is being well worked out, and presents a thrifty stand.

Oats.—The breadth of land seeded is much in advance of last year, and the crop looks well.

The other crops grown are more or less exceptional, but generally look and promise well.

Grass and clover will be largely in excess of the wants of all their stock,

and unless stock is driven in during the summer, much pasturage and hay will be lost.

Stock of all kinds is rapidly increasing, but is still far below the capacity of the land to carry profitably.

Up to this time Virginia, in her agriculture, may be considered as in a comparatively prosperous condition.

NORTH CAROLINA.

This State may be considered as entirely within the cotton zone, though tobacco and the cereals are both profitably cultivated, and to quite an extent. Cotton, tobacco, and rice are the commercial staples, though there is more or less surplus of the grains.

The cow pea enters largely into her system of profitable cultivation, and is exported to other States in considerable quantities. The cow pea is to the lands of the south as a renovator what the clover plant is to the north, and when cultivation is based upon that in a routine of crops, some highly remunerative results have followed. In 1860 the cotton crop was 145,514 bales, and her tobacco crop 32,853,250 pounds, and 7,593,976 pounds of rice. As these represent her commercial crops, the others can be considered only accessory.

Cotton.—The breadth of land planted is much broader than last year, but does not yet make one-half of the quantity planted before the war. In many of the upper districts much that was planted and partially worked has been abandoned for want of food for the laborers and for the teams. The plant has a good stand, and, with the above exception, has been well worked and promises well.

Wheat.—There is considerable good wheat land in this State, especially in the upper portions, as was shown by the last census, 4,743,706 bushels being reported. The crop this year will largely exceed that of last, but is fully three-fourths less than formerly. At this time it is looking well and promises a larger acreable yield than for many years past.

Corn.—This grain has not been planted to the extent that the exigencies of the country demand. It is a profitable crop to grow in this State, as there is a broad surface of good corn lands. The census reports 30,078,564 bushels, which makes it the seventh corn State in the Union. Its cultivation in the present state of labor will largely supersede cotton; it is looking well and has generally a fine stand. I saw a variety of white flint peculiar to this State, which the department will do well to distribute to localities in a kindred climate; it is a favorite further south, and outsells all other kinds put upon the market.

Oats.—This crop is sown upon nearly every farm, the design being to make enough for the teams. It failed largely last year, but the plant looks well now, and a much larger breadth has been sown than last year, yet not one-half the amount before the war, when the last report made the crop 2,781,860 bushels.

Rice.—Before the war the cultivation of this grain along the bays and rivers at tide-water was gradually increasing, and the quantity raised, as shown by previous figures, was quite an item in the commercial reports. The cultivation is now nearly abandoned. It requires capital and labor to carry on this the most profitable cultivation of any cereal in the whole list. But a small portion of the rice plantations are being worked at present, but upon those cultivated the plant has a fine stand and is looking well.

Tobacco.—As is shown by the figures, this is an important crop, and the largest made in any of the regular cotton States. The high price has stimulated its cultivation, and as labor could be secured more readily for its cultivation than of cotton or rice, a much larger breadth is planted than last year, and perhaps in corn and tobacco there is a nearer approach to the breadth planted in former years than in any other crop.

It would be well to note that the cultivation of the cow pea enters more largely into the system of farming in this than any other southern State.

In this I think the southern farmers have a most valuable plant, for by its judicious use in a proper system of rotation, the land can be rapidly renovated and at small expense. In this regard the North Carolina farms are far in advance. A favorite method with some very successful farmers is to sow last year's corn stubble in peas; when ripe put on hogs to harvest them, and then plough under vines and sow wheat. By this means the land is improved, and increased crops are the result.

SOUTH CAROLINA.

Being well situated for the cultivation of rice and cotton, and having a surplus of labor, this State has devoted its agriculture to the cultivation of these two merchantable products, to the neglect of all her other agricultural resources. In proportion to area she has but little more poor soil than North Carolina, while in her rice lands and sea islands she has much that is superior.

Cotton.—The census shows that there was grown, as reported, 353,412 bales; how much of this was sea island and how much upland does not appear, while the quantity planted is in excess of last year. It is safe to estimate that not over one-half of the land planted in 1859 and 1860 is now being worked, while through the region known as "Sherman's track," the same causes which compelled the abandonment of fields after they had been planted and partially worked in North Carolina has produced like results, only to a larger extent here. Some have been compelled to abandon entirely and at once, while others have discharged their hands and teams, and worked with their families in order to make some corn and a little cotton to save them from future starvation.

While much relief has come to many of these people, but a small portion have been relieved, from the impossibility of getting conveyance to find the suffering or to send relief when found. If the history of the past and present suffering of these people in the Carolinas, Georgia, portions of Alabama, and Mississippi is ever fully written, an amount of human suffering will be disclosed that has had no parallel in the Union. Even if the season be most propitious, there will yet be, until another planting and another harvest, untold misery and starvation.

It will hardly be credited that whole families have had no meat for weeks; that they have had but one meal a day, and that of pounded corn. Often they have denied themselves corn, that the sick could be fed, and have substituted roots and herbs gathered from the fields and woods. In one instance a husband had travelled some sixty miles to a relative, who had loaned him a cow then in milk, and there was joy in that family when the cow came. They had tasted no food for weeks but roots and herbs, and were weak and emaciated, but the milk restored their vigor. The man also brought a small parcel of seed-corn, and the cow was harnessed to the plough and a small patch of land was prepared for a future crop. This family consisted of father, mother, and five children. To the question, "Why don't you work?" "O, sir, tell us where we can get even a peck of corn or a pound of pork, and we will most gladly work, but everybody is like we are." And this is the condition of thousands.

Corn.—More has been planted this year than last. In many instances but little cotton is planted, and the energies of the farm devoted to corn. Yet they are all so badly in debt that an effort is made to grow all the cotton possible. In the census the corn crop is put down at 15,065,606 bushels. It will fall far below that this year. I doubt if it reaches half. To furnish any permanent relief it should be double. The plant is well cultivated and looks promising.

Wheat.—Only 1,285,631 bushels are reported by the census for this State. For the lack of seed and labor but a small breadth was sown last year; it is

being harvested in good condition and yields well, but so pressing are the wants of the people that but a little will be left for seed. In many instances the green wheat and rye have been cut up and fed to the mules to enable the farmers to work their growing cotton and corn crops.

Oats.—But a small crop, only 936,974 bushels, were made, as reported by the census; it is therefore of small consequence, though an effort has been made this year to sow considerable, but the scarcity of the seed and the poverty of the people have prevented anything like the usual breadth being put in.

Rice.—The census reported 119,100,528 pounds of hulled or merchantable rice. The great destruction of the expensive fixtures on the rice plantations by the war has nearly broken up the cultivation; added to this is the want of capital and of labor, and the cultivation of a plantation is the exception rather than the rule, nor will the vast rice fields be again cultivated till a new system of labor is established; resort must be had to the Chinese. If proper efforts are made, I have no doubt abundant labor of that kind could be procured at San Francisco. And the Chinaman once domiciled on these plantations, there will be no further want for labor, and cheap labor, too, for there is scarcely any place on this continent where a Chinaman can live so cheap as on the rice plantations of the South.

Tobacco.—This crop has been considered of small consequence in this State, the census only reporting 104,912 pounds. Whether there be really difficulties of soil or climate, or both, in the way of successful and profitable cultivation, I did not learn. As a part of the State is on the same range of the Blue Ridge with Virginia and North Carolina, there seems no good reason why it cannot be grown as well as in those States.

GEORGIA.

In many respects Georgia must be considered the empire State of the South. Her agriculture has been more diversified, and before the war was rapidly improving. She has a wide range of soil and climate, and is destined to become an important manufacturing region, as her resources in motive power, and in raw material and central location are not surpassed by any other State, either north or south. As soon as she gets through with her political difficulties she will rapidly improve.

Wheat.—There was a lack of seed last autumn, and, therefore, not as large a breadth was seeded as would otherwise have been sown; still, a fair crop will be secured, and as the harvest is nearly completed, it has been secured in good condition. Both in quantity and quality it has been satisfactory, and will afford immense relief to the famishing thousands within her borders. It has not been a profitable crop, nor has it been a favorite heretofore. The census shows 2,544,913 bushels. It is considered a hazardous crop, and only becomes profitable in exceptional years, as the present. Still, its cultivation will rapidly supersede cotton in all of middle and upper Georgia.

Corn.—By the census report there was grown in 1859, 30, 776,293 bushels. In its general surface the soil of Georgia is congenial to this plant, and it will rapidly approximate some of the larger corn-yielding States. The exigencies of agriculture will stimulate the rapid enlargement of the area of this plant under cultivation. When it becomes important to make the animal product of the farm approximate more nearly to that of the vegetable, corn and oats will rapidly increase in quantities cultivated. There is a large breadth now planted as compared with last year. Perhaps as compared with the year before the war it may be put down as nearly or quite one-half. The plant is looking well, has a good stand, and, though much of it is late, promises a good yield.

Oats.—The cultivation of this grain is increasing; by the census it appears only 1,231,819 bushels were given. There has been a good breadth seeded this

year, though much less than would have been sown but for the difficulty in procuring seed in time for early spring sowing. It is considered a precarious crop unless sown early in the season. Generally the plant looks well, as the season thus far has been most propitious.

Rice.—Although the quantity of rice reported by the census was only 52,507,652 pounds, and less than one-half of South Carolina, it was not for the want of good rice lands. The cultivation of this grain had not been as much engaged in, and capital had been turned to other branches of farming. The cotton lands of Georgia were more productive, or rather sections of them were, than those of the Carolinas ; and while it was found quite as profitable to buy and cultivate these lands, there is not a tenth part of the rice plantations under cultivation this year, though the price of the grain would make it very profitable. The want of labor and capital will seriously derange the future cultivation of all the rice lands of the South, and that branch of farming will be abandoned. The little now planted looks well and promises an abundant yield.

Cotton.—Up to the war Georgia was constantly increasing in the cultivation of cotton. New railroads were being continually built through the State, which, by giving increased facilities for marketing the staple, gave additional inducements for employing their constantly increasing surplus labor in this branch of industry, as it was not of a kind that could be safely or profitably employed in manufacturing. The census reports 701,840 bales, making her the fourth of the cotton States. The scarcity and high price of corn, oats, and hay, the want of means to purchase, and the price of labor, have compelled the planting of a less surface than last year; but the best land only has been selected, and the yield in the aggregate promises to be larger than last year to a moderate extent. The plant has a good stand, and as a general rule has been well worked out. The cool wet weather has retarded it, and in many localities has injured it, but still, if the remainder of the season be good there will be a good crop if there be help enough to secure it.

Tobacco.—This could not have been a favorite crop, as the census reports only 919,318 pounds. There is nothing in the climate or soil to prevent profitable cultivation. If the price continue as at present the cultivation of tobacco will increase, as it is the only commercial crop which can be made with comparatively little labor.

FLORIDA.

This State is small in area, and its agriculture can have but little influence upon aggregate productions.

Its peculiar location and delightful climate will make it sought for as the "truck patch" of the northern cities, for which it is most admirably adapted, and the fruit garden of the whole country. The cultivation of oranges, lemons, bananas, and other tropical or semi-tropical fruits, is largely on the increase, and as soon as quiet is restored to the land it will be rapidly peopled by those who will make its lands most valuable for these purposes. For cattle and sheep raising the interior holds out great inducements, and large herds are already to be found there. All its crops are especially promising, and the sea-island cotton, which is principally grown here, looks uncommonly well. A fair crop of wheat has been gathered. The high price obtained for their products has enabled the planters to pay such prices as have secured a good supply of reliable labor, and there will be a much nearer approximation to her former surplus of production than in any other State.

ALABAMA.

This was the second cotton State of the Union, reporting, according to the census of 1860, 989,955 bales of 400 pounds.

The lands of this State, especially for cotton, are only exceeded by those of

the Mississippi bottoms. Its agriculture was progressive, and the planters were active, energetic men, though they had adopted a system that must have resulted in the complete exhaustion of their soil. The soil and climate will induce a more healthful system of farming, and there is no reason why, under a judicious system of cultivation, it should not rank among the first States of the Union in wealth and population.

Wheat.—There has not been much attention paid to this crop, though there are large quantities of excellent wheat lands. The breadth sown last fall was not large, both for the want of seed and of labor. The census reports only 1,208,444 bushels in 1860. As the average yield has been good, and the quality excellent, the crop will not fall far below these figures this year.

Corn.—Like Georgia this can be made an important corn State. The year the State grew so large a crop of cotton, it also produced 33,228,282 bushels of corn, placing her first among the cotton States in corn-growing. The farmers have planted largely this year. There is now seeded in corn nearly double the breadth of last year at this time, and it is generally looking well and promises a good crop.

Oats.—This was considered an insignificant crop; only 682,179 bushels were reported by the census. The probability is that the crop will largely exceed these figures this year.

Rice and tobacco.—These crops were not important in this State before the war. Only 989,955 pounds of rice and 232,914 pounds of tobacco were reported in the census, and but a very narrow breadth of land this year is in either crop.

MISSISSIPPI.

If the river could be restrained within its banks, so that the danger of the annual floods could be avoided, this would be the most valuable agricultural State in the Union. In 1859, as reported in the census of 1860, on 5,065,755 acres of improved land she grew over a half million bushels of wheat, 29,059,682 bushels of corn, some oats, rice and tobacco, and 1,202,597 bales of cotton. The destruction of the levee along the banks of the river by both armies during the war, and since by the floods of the river, has rendered the lands so insecure in regard to the floods, that a large portion of the finest lands in the Union, not surpassed even by the Nile lands of Egypt, is being abandoned, and will soon be given up to a cottonwood jungle. As this subject of the condition of the bottom lands will be alluded to in another part of the report, I pass over it for the present. When I saw these lands there was a strip of the best of them ten to forty miles wide submerged by an unusually high flood, and if it subsided in the usual time, even then it would not be possible to make a full crop either of cotton or grain.

The suffering by reason of the inundation has been very great. The loss of life among the freedmen has been serious. Even if they escape the usual June overflow, there will not be the usual breadth of land of last year cropped, and it must depend upon the uplands and poorer portions of the State for any considerable crop.

Wheat.—But little of this grain has been grown—only 587,925 bushels. There has been made this year a crop fully equal to that reported by the census.

Corn.—Though this crop is ordinarily an important one, there has been a scarcity since the war and the partial failure of the crop last year. Only a small crop was harvested. Large quantities have been brought down the river to support teams and laborers in making the present crop. Owing to the high water the breadth of land planted will not be as large as last year, and a diminished crop will be the result. As a general rule the plant looks well and promises a good yield.

Oats.—The census reported 221,235 bushels, and the crop bids fair to largely exceed these figures this year.

Rice and tobacco.—These crops have not been important in this State, as the census reports only 809,082 pounds of rice, and 159,141 pounds of tobacco. There is but little planted this year, and the crop will practically amount to nothing.

LOUISIANA.

This is an important agricultural State and has some of the most valuable lands in the Union; it is the only State, except Texas, where cane sugar can be profitably cultivated to any extent. The product by the census was 221,726 hogsheads of sugar of 1,000 pounds each, and 13,439,772 gallons of cane molasses. Florida made 1,669 hogsheads of sugar, and 436,357 gallons molasses; and Georgia 4,167 hogsheads of sugar, and 546,749 gallons of molasses; and Texas made 5,099 hogsheads of sugar, and 408,358 gallons of molasses. The aggregate of cane sugar made in the Union was 230,982,000 pounds; of cane molasses, 14,963,996 gallons; while the aggregate of maple sugar for the same time was 40,120,083 pounds, and maple molasses 1,597,589 gallons, and 6,749,123 gallons of sorghum molasses, showing the great importance of the lands which can be profitably cultivated to sugar cane.

Sugar cane.—There are comparatively but few plantations of cane being cultivated this year, owing to the flood, to the want of seed cane, and the scarcity of capital, and of reliable labor. It is very doubtful if one-fourth of the plantations cultivated before the war are now under cultivation, though great profits which might and can be realized would naturally be supposed to tempt capital to embark in their cultivation. Sugar plantations of the first quality, near New Orleans, can now be bought for less than $20 per acre, that would net not less than $100 per annum in sugar; for the want of seed cane to stock them, and capital to work them, they are abandoned now and rapidly being grown up to cottonwood and other brush.

Wheat and oats.—These crops were simply insignificant, being only 32,208 bushels of the one, 89,377 bushels of the other, reported. Equally abundant crops of each will be made this year, and hereafter the cultivation will largely increase.

Corn.—This crop will largely exceed that of last year, though far behind the one reported in the census, which was 16,853,745 bushels. Off from the bottoms, the plant looks well and promises a good yield.

Rice.—This crop has been cultivated to some extent, as the census reports 6,331,257 pounds. Very little land is now under cultivation, and the crop will be hardly worth mentioning.

Tobacco.—This plant seems to have been but little cultivated; the crop is reported at 32,901 pounds, by far the smallest in any cotton State. I could hear of but little being planted, generally only for home use.

Cotton.—This has been the third cotton State, as the census reports 777,738 bales. The flood has so affected the best cotton lands, that it is very doubtful if there will be as much made as last year, and that was a very small crop as compared with 1860. Preparations were made in the spring for a large crop, but the flood has frustrated their calculations in a serious degree. The hands have died or are dispersed; the loss of mules by the depredations of the buffalo fly has been so large as to seriously affect team labor, and retard work on plantations which have not been reached by the flood. All these disasters combined will reduce the crop in the aggregate below that of last year. Altogether the prospects of the cotton planters in this State, and indeed on all plantations on the cotton lands of this State, and the States above on both sides of the river, are most gloomy, and will rapidly lead to the abandonment of these lands for cotton cultivation.

As I did not visit Arkansas or Texas, I can only speak of these States from

information furnished by residents whom I met along my journey. Arkansas is in much the condition of Mississippi, by reason of the flood, and the remarks in regard to that State would apply to it. By the census it appears there were made 367,393 bales of cotton and 17,823,588 bushels of corn. Both of these crops may be larger in the aggregate than last year, but will be small as compared with those reported by the census.

Texas has suffered less than any other southern State from the war, and last year was a productive one in her agricultural products. The planters have made preparations for a large crop of cotton this year. The census crop was reported at 431,463 bales, and it is expected that half of that number may be reached this year. I shall not be surprised, from present appearances, if the crop reach even more than that, while the corn crop will probably exceed that made before the war. The agriculture of Texas is in a highly prosperous condition.

The "Ramie."—While in New Orleans my attention was called to specimens of the *Boehmeria tenacissima*, introduced from Java via Mexico by Don Benito Roezl. It is a valuable plant, and may be destined to have an important bearing upon the agricultural interests of the South and the nation. I saw it growing in the propagating garden of the Agricultural Fair Association. These will be on exhibition at their fair in November, with fabric and fibre.

MISSISSIPPI FLOOD.

My attention was called to the deplorable condition of the country which had been devastated by the overflow of the Mississippi river. The flood had become serious in its magnitude at a much earlier period of the spring than usual. Its volume was expanded by the early breaking up of the Missouri and its mountain tributaries, and the annual overflow of the Ohio and its tributaries was thus met by the unseasonable flood of the Missouri, which, together with the unusual overflow of the rivers below the Ohio, combined to make the flood of this spring one of the most memorable in regard to its magnitude and its destructive consequences.

For over a thousand miles from Cairo to Fort St. Francis the country on each side of the river was submerged for the average distance of thirty miles, making an aggregate of full sixty miles wide by one thousand miles in length, that was covered by a depth of water varying from many feet to a few inches.

Large preparations had been made to try and repair the losses which had been incurred the last year by the partial failure of the crops from various reasons. In innumerable instances that came to my knowledge they had reached from five thousand to even twenty thousand dollars, and returning prosperity or total ruin was involved in the results of this year's crops. Perhaps in no section of the South have more desperate efforts been made than on the bottom lands of the rivers which have been so sadly affected by this great flood. Hundreds of planters have risked their all, the result must be a serious loss. The levees have been destroyed by war and by the flood Always expensive, and in the most prosperous times requiring constant supervision, and heavy annual repairs, they have been so long abandoned that where five years ago there were open and well cleared lands, the cottonwood has grown up in a thick jungle from twenty to sixty feet high, and the clearing for a crop would involve greater labor than was required to clear off the original forest, though that involved the clearing of cottonwood trees of enormous size.

I am satisfied that upon all the lands which have been inundated not half a crop will be raised. A very large breadth that had been prepared and partially planted has been abandoned entirely, owing to the loss and dispersion of labor in the freedmen and the mules, and the lands thus abandoned would under favorable circumstances have produced at least a bale of cotton to the acre. The

cotton culture was concentrating on these lands from the less fertile and productive States east, and any calamity which befalls the plant here must be felt in the aggregate of the crop. There can be little doubt as to the crop being at least half below that of last year, and not one-tenth part of the crop reported in 1860, and which has been mentioned in another part of this report.

How these lands, so valuable for the future cultivation of sugar and cotton, are to be saved, is a question of serious import to the whole people of the Union. By consulting the very exhaustive and invaluable report made by Captain Humphreys and Lieutenant Abbott, upon the Mississippi river, much matter of the utmost importance will be found.

They have divided the valley into two sections, one above and the other below Red river. Of the section above there is not less than 6,000,000 acres tillable, which if once reclaimed would not be worth less than $25 per acre. If well under cultivation $10 per acre would not be considered a high rent. Below the Red river there was more than a million acres under cultivation which was then valued at $100 per acre, making an aggregate of upwards of seven millions of acres, of the value of two hundred and fifty millions of dollars.

To reclaim and protect this land will cost not less than $25,000,000, with all the work now done in the way of protection. They show that the only safe and sure method is by levees, and to make them effective and ultimately useful they should be done by the general government, and upon a plan which they have mentioned after long consideration, and submit in their report. The cost would be less than four dollars per acre, and would be cheerfully paid by the land owners, or could be easily collected from the land, as its enhanced value would insure its prompt collection.

I would suggest that the subject has a national importance that will warrant you in calling the attention of Congress thereto.

Of the various crops mentioned in the foregoing report, cotton has the most dangers to surmount. It is hardly possible that the plant will be equally successful over the large region where it has been planted, or that it will escape the many enemies that usually assail it in its progress. I can only say that a partial failure will be considered most disastrous by nearly every planter who has engaged in its cultivation.

I am, sir, most respectfully, your obedient servant,

THEODORE C. PETERS.

Hon. Isaac Newton,
Commissioner of Agriculture.

IMPORTATION OF SHEEP.

There is a general revival of interest in long-wool sheep. The Cotswolds, of the improved English breeds, are the most popular. Mr. Burdett Loomis, of Connecticut, proposes to go to Europe for the purpose of enriching his flocks with the best blood attainable. Others have recently made valuable importations. The following correspondence has arisen from the anxiety of importers to conform to the Treasury regulations relative to rinderpest:

Department of Agriculture,
Washington, D. C., June 15, 1867.

Sir: A correspondent of this department, an importer and breeder of thorough-bred long-wool sheep, is desirous of knowing whether, under present instructions for executing the law of Congress guarding against rinderpest, any restriction of the importation of such stock now exists. I have never heard of

an authenticated instance of communicating the infection through sheep, and rarely has any of the race taken the disease, even in the midst of herds dying of the most virulent forms of rinderpest.

While extreme caution, as long as the danger exists, is highly important, the wool interests of this country would be greatly subserved by the introduction of improved English stock from districts which have been entirely free from rinderpest for the last ten or twelve months.

The information sought will prove important to many others.

I am, sir, your obedient servant,

J. W. STOKES,
Acting Commissioner.

Hon. HUGH MCCULLOCH,
Secretary of the Treasury.

TREASURY DEPARTMENT,
June 15, 1867.

SIR: Your letter of this date has been received, inquiring if the laws and regulations guarding against the introduction of the rinderpest prevent the importation of sheep, and in reply you are advised that the law is pointed only at neat cattle, and the hides of neat cattle, and that there has been no restriction placed upon the importation of sheep. I would suggest, however, that as it is said the disease is sometimes communicated through the medium of wool, either in the fleece or upon the sheep, it would be prudent to cause sheep coming from countries where the disease prevails to pass through a disinfecting process if practicable.

I am, sir, very respectfully,

H. MCCULLOCH,
Secretary of the Treasury.

Hon. J. W. STOKES,
Acting Commissioner of Agriculture.

THE SCAB IN TEXAS SHEEP.

The following is furnished by Thomas Affleck, a well-known citizen of Texas, residing at Brenham, Washington county:

"The writer, a citizen of Texas, anxious to inform himself thoroughly of the causes which make sheep-farming, whether in breeding or feeding, so successful in the little island of Great Britain, whilst very moderately so in the United States, made this the subject of close investigation there during the past winter. The results may be of general interest; but especially to those engaged in sheep-farming in the southern and western States. There is no other branch of farming in which so much has been made during the past twenty-five years in Great Britain, as in this; and that, be it understood, in the regular breeding and feeding of sheep for their wool and mutton.

"Mutton is a much more popular article of food in England than in America, and is always fed up to the highest point of perfection, as to fatness, attainable at the early age at which the animal is slaughtered.

"To my taste, with the exception of an occasional slice or rib of the black-faced mutton of Scotland, fed more on grass than on turnips and oil-cake, it is generally surpassed in delicacy of flavor and juiciness by that fed upon the *Bermuda grass* of Mississippi, or the *mesquit grass* of Texas.

"It is unnecessary to discuss here the different breeds, and their comparative excellence for mutton or wool. All are bred, fed, and handled with the utmost

care, system, and judgment: and this with a view to both mutton and wool. Combing-wools seem now to be most valued and carefully bred. There is none of this class imported which competes successfully with that of British growth, unless it be some from Australia and New Zealand, the yield of long-wooled breeds exported thither years ago, and now composing large flocks there.

"Cross-bred sheep, as they are called, are favorites with most feeders; and for certain purposes the wool of some of the crosses is highly valued. Leicester tups bred to Cheviot ewes make a popular cross. Both parents, in every case, are kept pure for the purpose. And it seems to be universally conceded that the *first cross* is alone desirable. It is seldom carried further, unless by way of experiment. The conclusion I arrived at is, that to constant and systematic care is ascribable the almost uniform success in this business in Great Britain.

"To one point of exceeding interest to us, in Texas, I gave much attention. Just before the war, certain lots of Merino tups, infested with that dreadful pest the *scab*, were brought into the State, and having been readily bought up for the further improvement of flocks, disseminated the disease all over the State. During the war the usual remedies employed for destroying the scab insect were not readily attainable, or could not be spared for this purpose, so that the pest spread more and more, almost exterminating many flocks, and these always of the finest-wooled Merinoes. Some persevered most faithfully, under every difficulty, in their efforts to eradicate the disease, employing various means, as strong lime-water with sulphur, tobacco ooze, arsenic, &c.; but, as is supposed, without complete success in any instance. Mr. G. W. Kendall, in one of his valuable articles in the Texas Almanac for 1867—valuable, because always honestly true, and to the point—recounting failures as well as successes, hopes to succeed by the use of tobacco.

"I could not learn of any entire cure by this means alone, either in Great Britain, Australia or New Zealand, in which colonies *scab* well-nigh ruined the flock-master in spite of tobacco, sulphur, arsenic, &c. The insect may be destroyed in the flock by the repeated and persevering use of these ingredients, but their effect is soon dissipated. The insect is still present in the range or sheep-walk, and on every tree or post against which the poor tortured animal may have rubbed itself; or a single infested spot on a single animal of the flock may have been overlooked, and soon proves sufficient in the clear atmosphere of the colonies named, so like our own, to infest the entire flock. Moreover, all of these remedies, together with mercurial preparations, hellebore, &c., are dangerous both to sheep and shepherd; and, as was pointed out to us by wool-buyers and consumers, all render the wool more or less harsh, and tender in the staple. This was sought to be remedied by the use of oily compounds. In old times, and to some extent in the highlands of Scotland even yet, sheep were smeared with a mixture of pine tar and palm oil, or cheap butter. But the damage to the wool by staining, &c., is so great as to have caused its abandonment, except upon open-fleeced breeds in exposed ranges.

"The discovery within a few years of the acid of coal-tar, known as carbolic, cresylic or phenic acid, and of its effects upon insect life, and as a most powerful disinfectant, antiseptic, and curative and cleanser of sores and wounds, has produced a complete revolution in sheep-dips.

"Certain manufacturing chemists in England made and patented saponaceous and other compounds of cresylic acid. One of these, a cheap compound of the crude acid with fatty matters, made slightly saponaceous, and known as McDougall's sheep dip, has come into almost universal use.

"The writer, finding this to be the case, as the result of his search after a means of ridding Texas of the pest, followed up the subject from the laboratory, the farm of the sheep-walk, to the wool market and the factory, and found the report to be, with hardly a dissenting voice, that it supplied the great desideratum—a cheap means of destroying vermin and curing cutaneous diseases in

sheep, and preventing their return for some months after each dip, even in an infected range; healing and cleansing to the animal; harmless to the operator; increasing the growth of wool, rendering it at the same time soft and without discoloration.

"Much more was claimed for this acid which would need confirmation by experiment here. Cresylic or carbolic soaps are made of various qualities, for different uses. The coarsest is this sheep-dip, being made of crude or undeodorized acid, and is used upon dogs in the kennels and elsewhere, driving off and preventing fleas, curing mange, &c., to prevent ticks on cattle, horses, &c. A hard brown soap in bars, partially deodorized, is required to be used in hospitals, infirmaries, jails, barracks, on ship-board, &c.; being, at the same time, a powerful disinfectant. A better quality is coming into general use in families for washing clothes, bedding, &c. It is asserted that neither fleas, bed-bugs, nor any other vermin will touch clothing so washed; and more wonderful still, that mosquitoes will not touch face or hands washed with the cresylic hand-soap before going to bed. The acid is found to be a complete preventive to the destruction of all wooden structures in the East Indies by the white ant, and is also said to be the basis or active principle in all the preparations offered for preventing the fouling of the bottoms of iron ships. The British government requires the free use of McDougall's disinfecting powder on board of all emigrant and troop ships, in barracks, &c. Altogether, it would appear that science has discovered in this acid a great boon to man, and especially to the agriculturist in the country.

"To us, in Texas, it will prove of great value. The greatest trouble, and almost the only one which the energetic and systematic stock-breeder here has to contend with, is what we know as the *screw-worm*, the maggots of a large gray fly, which are deposited instantly upon a fresh wound, or even a drop of blood following a mosquito or fly-bite. The maggots quietly penetrate the skin and eat rapidly into the flesh. Horses and sheep, if not attended to at once, suffer terribly; cattle are more easily cured, and swine cure themselves by wallowing in the mud. Calomel, put in the orifice, is the most common remedy. Cherokee liniment is also used largely. But both are costly, and the latter is severe in its effects. From what I have seen of its application in like cases, I shall use the cresilic sheep-dip as a sure and cheap remedy. I learn that the value of this acid had been discovered by chemists in the United States, and a company has been formed in New York for the manufacture of soaps, sheep-dip, &c. If so, it is important that the fact should be made public and thus save the trouble and cost of importation. The sheep-dip, as used in Europe, is a black and stiff soft soap, put up in tin cans, kegs, barrels, &c.; smells strongly of coal tar; is dissolved in soft water until about the consistency of rich milk, into which the sheep are dipped immediately after shearing, and again in the fall. Ten pounds of the composition, costing five shillings, are sufficient for fifty sheep; that is, the large, heavily fleeced English sheep. Each animal is kept in the bath a full minute, and where scab is present, some of the dip is rubbed well into the infected spots.

"Sheep-dipping is largely followed as a business. A light wagon to carry a barrel of the composition, with a nest of three or four oblong tubs of galvanized sheet iron, is all the stock in trade. These dippers, buying the article in bulk, get a liberal discount; and charging about twopence a head, make a good business of it at five shillings for enough to dip fifty sheep; the cost is about two and a half cents, coin, per head. Wages, &c., being higher here, the charge would be somewhat more.

"Every flock-master with whom I conversed claimed that the increased growth of wool was greater than the cost of dipping. As the obnoxious effect to insects continues for months, the animals are not again infected even though the causes might still exist in the range or upon an occasional sheep."

VOLUNTEER OATS.

Samples of oats are received from George Clendenin, of Glenwood, D. C., four feet six inches in height, and promising to be unusually heavy, which were sowed a year ago, and ploughed under in September last, the ground being seeded with timothy. They have grown with the timothy, and will probably yield a third of a crop of heavy oats. Mr. C. proposes to sow them in the fall, and make an attempt for a crop of winter oats.

SALMON PROPAGATION IN AUSTRALIA.

An interesting experiment in pisciculture has resulted successfully. An attempt was made to hatch salmon once in Australia, which had been transported sixteen thousand miles in ice, and the result after three years of effort and waiting, by Mr. James Youl, Edward Wilson, and others, is a fine run of veritable salmon up the Derwent, and a promise of future abundance for local consumption and even exportation. The following statement is made by a local paper, the Hobart Town Mercury :

"It will be three years next month since the first batch of salmon ova was landed on these shores, and the joy that was felt at the discovery that they had been landed in a sound and healthy condition will not be soon forgotten. We had long been laboring ourselves, and had long had earnest friends at home laboring, for the introduction of salmon into our waters, and we look upon this, after two or three bitter disappointments, as the first step towards the realization of our wishes. Still, few were so sanguine as to think the difficulty altogether surmounted, and the majority of those rejoiced with trembling. They said let us see fish hatched from the ova first, and turned out into the Derwent next, and we shall then be better satisfied. At length both these conditions were fulfilled. And then not a few shook their wise heads on hearing that the first batch of salmon had been sent out to sea, and said they would never come back. They were either to perish for want of suitable food in these seas, or were to be destroyed by their natural enemies. But rather less than three years has been sufficient to show the groundlessness of these fears."

SALMON LADDERS.

The following plan of a salmon ladder has been exhibited at Bergen, in Norway, by a Mr. Hetting, and a model was to be exhibited at the Salmon Fishing Congress, which was to open on the 7th of the present month in London. The troughs connecting with the boxes are twelve feet long, three feet broad, and three feet in depth. The resting-boxes are eight feet long, six feet wide, and five feet deep. The last debouches into the river against the stream. No water is allowed to run through it in winter, thus avoiding the danger of bursting from ice. The author of "Sport in Norway," who communicates the information to Mr. Buckland, the English naturalist, says the salmon has been known to leap a fall of twenty feet when the water is sufficiently deep to enable them "to get a good spring."

HUNGARIAN GRASS, *(Panicum Germanicum.)*

The Department of Agriculture having recently sent to the southern and southwestern States a quantity of the Hungarian grass seed, and inquiries having been made as to its value, the manner of culture, &c., it has been deemed proper to give the information sought.

Many farmers have kept both horses and horned stock through the winter with no other feed than Hungarian grass; the animals coming out of winter quarters in a superior condition. There need be no fears of poisoning, as intimated by one correspondent; the suggestion probably arose from injuries resulting from over-eating.

This grass is now generally used and highly esteemed for forage, is used green or dry, is very productive, of quick growth, and flourishes well in dry soils.

Flint, in his valuable work on grasses, says: "The Hungarian millet has been cultivated to some extent in this State (Massachusetts) from seed received through the Patent Office. It is an annual forage plant introduced into France in 1815, where its cultivation has become considerably extended. It germinates readily, withstands the drought remarkably, remaining green even when other vegetation is parched up, and if its development is arrested by dry weather, the least rain will restore it to vigor. It has numerous succulent leaves, which furnish an abundance of green fodder, very much relished by all kinds of stock. It flourishes in somewhat light and dry soils, though it attains its greatest luxuriance in soils of medium consistency, and well manured. It may be sown broadcast or in drills and cultivated precisely like other varieties of millet."

D. B. Dixon, of Muscatine, Iowa, after experimenting with this grass, remarks: "It is luxuriant in its growth, and produces hay of the finest quality. Horses and cattle eat it with avidity. A good crop of Hungarian grass is about three tons of hay and thirty bushels of seed to the acre, while it will often go beyond and seldom falls below this. The time for cutting is when the seed is nearly ripe, and the whole plant of a fine yellow color. It may be cured in the same manner as hay. As fodder, after threshing, it is fully equal to timothy; and when fed out with the seed in, as it generally should be, it is better than good sheaf oats."

William Story, of Jamestown, Fentress county, Tennessee, says: "I send you a full account of my experiments with the Hungarian grass. On the 10th of June, 1858, I received a pint of the seed from the Patent office, and on the 11th I sowed it on a piece of rich clay land. I ploughed the ground with a shovel plough, which left the surface very rough and uneven. I then harrowed about one-fourth of the patch, leveling the surface very smooth. After sowing the seed on all the ground I again harrowed. The ground was very dry, and the weather continued hot for three weeks; consequently it was some time before the seed came up. I was soon sorry I had not harrowed all the ground before sowing, for where I had omitted this operation but few seeds came up. Notwithstanding the extreme heat of the sun the grass grew astonishingly fast, branched out beyond all expectation, and grew about waist high by the first of August. It was headed out like millet, though seeming more vigorous and hardy. By the 10th of August the heads, which were from one to six inches in length, were all turned to a golden-yellow color. I cut and threshed off the seed, and had sixty-three pints from the one pint of seed sown. I am confident that not more than half the seed came up, and consequently the sixty-three pints were the product of half a pint of seed. In Tennessee it should be sown about the first week in May, on clear and loose ground, harrowed smooth before and after sowing. One bushel of seed will, I think, sow three acres. I recommend the Hungarian grass to be the best and most nutritious of all grasses, and shall rejoice when our State shall be well supplied with it."

THE WHEAT SCARCITY.

Both farmers and consumers may well deprecate the unprincipled operations of speculators, and fear the effect of their combinations and perversions of facts.

The immense aggregation of wealth in the hands of fortunate stock and produce gamblers enables them to accomplish what would never have been attempted years ago.

As we have repeatedly shown, there has been a gradual decline in wheat production for three years past, more from diminished yield than decreased acreage, yet still leaving for the past year's consumption about five bushels per capita of population. This is ample for the people's bread, a little for export, and a surplus so much reduced, in comparison with former stocks in granary or storehouse, that speculators have been led to believe that they could control it, and compel, for a time, enormous prices from unwilling hand-to-mouth consumers; and very well have they succeeded, as $18 to $20 for a barrel of flour will attest.

California, with eleven millions of bushels of wheat, nearly half of which was surplus, was compelled to go abroad for a market; and owing to high prices, caused quite as much by a *cornering* process as by legitimate scarcity, was induced to make repeated shipments to New York instead of to Liverpool. Straightway telegrams were circulated, designed to show the dependence of the States upon California for wheat, the reshipment of wheat from Liverpool, the transmission of these extraneous supplies to Buffalo, and even to Chicago, until timid people were taught speedily to expect a famine.

With the first intimations of moderate success in the coming wheat harvest came a collapse of prices, as a matter of course. It now appears that there was not only wheat enough for sowing an extra breadth of spring wheat for the demand caused by heavy emigration, for the bread of our own people till harvest, but also for a larger exportation than for a similar period of last year.

A statement of British exports for the first three months of the calendar year, which is received at the Department, shows the following result, from January 1, 1866, to April 1, 1867:

	1866.	1867.
Wheat, cwt..	302, 084	680, 361
Wheat flour, cwt	162, 412	78, 464

This is equivalent when reduced to bushels, to 917,786 bushels, in the first quarter of 1866, and 1,456,192 bushels in the same period of 1867, showing an actual increase, in this era of speculative famine of 494,406 bushels; fifty per cent. increase of wheat exports furnishes a good commentary upon the mendacity which has cost consumers more than half of the increased cost of their recently purchased flour. The invoice price (in gold) of this wheat averaged $1 32 in the former period and $1 42 in the latter; of flour, $6 41 in 1866, and $6 71 in 1867.

It is everywhere reported of late that farmers are bringing out hoarded wheat, from 100 to 200 bushels each. They are content to take prices much less than those recently offered.

It is unfortunate that newspapers are so much at the mercy of panic makers. The constant iteration of specious but deceptive facts, not to mention pernicious falsehoods, naturally begets a growing belief in the statements made, until the whole community is fearful of prospective starvation. Great care should be taken to guard against such mischief-making.

Table showing the condition of the crops, &c., on the first day of June, 1867.

STATES.	WINTER WHEAT.		WINTER RYE.		WINTER BARLEY.		SPRING WHEAT.		SPRING BARLEY.	
	Average acreage compared with last year.	Average condition on the 1st of June compared with last year.	Average acreage compared with last year.	Average condition on the 1st of June compared with last year.	Average acreage compared with last year.	Average condition on the 1st of June compared with last year.	Average acreage compared with last year.	Average condition on the 1st of June compared with last year.	Average acreage compared with last year.	Average condition on the 1st of June compared with last year.
Maine	10	10.6	10.1	10.4	10	10	11	9.4	9	9
New Hampshire	10	10	10	10	10	10	11.5	10	10.4	10
Vermont	10.3	11.3	10	11.3	10	10	11.5	10	10.4	9.4
Massachusetts	10.7	12.5	10.6	12.1	10.3	11.3	11	10.7	10.7	10.7
Rhode Island	.....	.....	10.7	10	.....	.....	.....	.....	10.3	9.7
Connecticut	10.3	11.7	10.8	11.6	10	12	10	10.8	10.5	11
New York	10.6	11.4	10	11	9.5	9.1	11	9.7	9.5	9
New Jersey	10.5	11.7	10.3	11.3	10	11	10	10	8	11
Pennsylvania	10.1	15.5	10.5	12.1	10	11	9.7	9	9.3	10
Delaware	10.5	13	10	12	.....	.....	.....	.....	10	10
Maryland	10.4	13	10.1	11	.....	.....	.....	.....	10	9.3
Virginia	13.3	20	11	13	10	10.5	7	10.5	.....	.....
North Carolina	10.8	14	10.5	11.1	10	10	9.5	13.5	10	10
South Carolina	10.7	15.4	9.5	12.8	8.7	10	9.3	15.7	10	10
Georgia	11.1	16	10.2	12	10	12.5	10.5	14	11.5	14
Florida	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alabama	10.7	16.2	10.2	11.2	10.3	11	.....	.....	.....	.....
Mississippi	10.7	12.3	9.4	10.3	9.5	8	10	10	12	10
Louisiana	11.6	10	8.5	9	.....	.....	.....	.....	.....	.....
Texas	8	8	8	9	8.6	9	8	6.8	6	10
Arkansas	13.4	10.8	9	9	12.5	11	11.7	15.5	12	15
Tennessee	12.5	15.3	9.7	10.3	11	11.1	10.5	13	10	10.6
West Virginia	9.9	18.8	10.5	13.9	9.8	12.7	11	12.3	10.8	10.1
Kentucky	10.5	15.3	10.1	12	9.3	11.7	9.4	9.7	9.6	10
Missouri	12.9	13.9	10.5	13	10.4	11.7	13.1	13.1	11	11
Illinois	9.8	11.5	9.8	11	9.9	10.1	12.5	11.2	9.6	10.4
Indiana	8.6	17.3	9.7	11	9.7	11.7	14.8	11.3	9.5	9.8
Ohio	8.4	26	10.1	17.4	9.2	18	13.7	11.7	10	10.3
Michigan	10.6	18	10	11	10.1	10.6	11.6	10	10.2	9.6
Wisconsin	9.7	12.2	10	11.2	9.9	10	11.5	10.7	9.5	10.5
Minnesota	10.5	10.7	12.3	9.5	10	10	13.5	11.3	12	10.8
Iowa	9.6	10.1	9.5	10.6	9.9	10.4	12.8	10.5	9.9	10.2
Kansas	8.3	8.7	8.7	9.1	9	9	13	10	9.6	10
Nebraska	8.1	7.6	9	9.2	10	8.7	19	10	11.3	9.4

Condition of the crops, &c.—Continued.

STATES.	OATS.		CLOVER.		SPRING PASTURE.		MAPLE SUGAR AND MOLASSES.		SHEEP.	
	Average acreage sown compared with last year.	Average condition on the 1st of June compared with last year.	Average acreage compared with last year.	Average condition on the 1st of June compared with last year.	Average condition of pastures other than clover on the 1st of June compared with last year.	Average condition of clover pastures on the 1st of June compared with last year.	Average amount of maple sugar made this spring compared with last year.	Average amount of maple molasses made compared with last year.	Average per centage of loss by disease or other casualty.	Average per centage of loss of lambs dropped this spring compared with last year.
Maine	9.7	9.5	10	14	11.1	12.1	9.5	9.5	5	10
New Hampshire	10	10	10	10.4	9.7	10	8.2	8	7	10
Vermont	10.7	9.4	10	11	11.5	11.5	9	9	9	13
Massachusetts	10.4	10	10.5	12	11	11	10	6.3	4	6.5
Rhode Island	10.7	9.7	10.7	10.3	9.7	10	.....	.....	.....	.....
Connecticut	10.6	10.4	10	11.6	10.3	11.4	9.7	9.3	3	4
New York	9.2	9	10	10.5	10	10	9.3	9	5.5	14
New Jersey	10.4	10	10.4	10.7	10	10.3	.....	.....	10	10
Pennsylvania	9.5	9.4	9.7	11.4	10.2	11.1	9.4	9.2	8	14
Delaware	9	8.5	10	11	11	11	.....	.....	5	6.5
Maryland	10.3	9.7	9.8	11.3	10.5	11.5	.....	.....	8.4	15.7
Virginia	10.3	8.4	12.6	11.7	11.3	11.6	8.2	9.5	9	13.2
North Carolina	10.5	9.7	11.3	10.7	10	10.5	6	4	18	17
South Carolina	11.7	12.1	10.7	10.7	10	11	.....	.....	13	21
Georgia	12.2	11.3	13.4	10	11	9.7	.....	.....	12.3	13
Florida	10.4	10.3	.....	.....	11	12	.....	.....	21	14
Alabama	11.6	11.2	11.4	11.1	10.7	11	.....	.....	14.7	19.4
Mississippi	10.6	14.7	6.5	9.3	10	9	.....	.....	12	13
Louisiana	11	10	10	13	10	11.5	.....	.....	8.2	9
Texas	8	7.6	10.7	12.3	10	10	10	10	12	17
Arkansas	13.8	10.8	10	8	10	7.7	12.5	10	18.5	13.7
Tennessee	11.3	9.2	12.8	10.3	10	10.7	8.6	8.5	16	16.5
West Virginia	10.8	9.7	10	11.1	11	11	8.5	8.6	8	16
Kentucky	10.1	8.6	10.2	9.9	9.5	9.5	7.2	7.4	7	12
Missouri	11.9	10.8	10.6	10.7	10.6	10.6	10.4	10.5	11	20
Illinois	10.4	10.2	10.4	10.8	10.1	10.6	10.3	10.5	7	10
Indiana	10.4	9.6	9.7	10.5	9.5	10	11	11.3	17	23
Ohio	9.7	9.3	10	11.7	10.3	11.4	10.2	10.	8	10
Michigan	10.9	9.6	10.2	10.9	9.6	10.5	11.7	11.3	9	13
Wisconsin	10.7	10.5	10.8	10	9.1	8.8	9.8	9.5	8.3	15
Minnesota	12	10.9	10.5	10.8	9	10	10.4	10	24	37
Iowa	11.1	10.1	10.5	10	9.1	9.6	8.1	8.2	13	25
Kansas	11.1	10	10.7	9.6	9.7	9.3	10	10	9.1	14
Nebraska	13	10	11	9	8.9	7.5	10	10	13	21

Condition of the crops, &c.—Continued.

STATES.	WOOL.	COWS AND CALVES.		APPLES.		PEACHES.		PEARS.	
	Average per centage of last year's clip of wool in the county.	Average condition of cows this spring.	Number of calves dropped this spring compared with an average of former years.	Average amount of apple bloom this spring.	Average condition of the crop on the 1st of June.	Average amount of peach bloom this spring.	Average condition of the crop on the 1st of June.	Average amount of pear bloom this spring.	Average condition of the crop on the 1st of June.
Maine	5	9.7	9.7	10.5	9.8	10	10	12	11.3
New Hampshire	20	9	10.3	8.8	9.5	11.3	11.3	11	11.4
Vermont	9	9.5	10	10	9.5	.....	.....	11	11
Massachusetts	16	10	10	9.7	10.5	11.6	11.6	11.3	10.8
Rhode Island	.....	9.7	9.7	8	10	11.7	11	11	10
Connecticut	15	10	10	10.4	10.4	12.3	14	11.8	11.6
New York	16	10.1	10	11.1	11	9.7	10.5	10.6	10.5
New Jersey	52	9.7	10	9	11.6	11.6	11	11.8	10.5
Pennsylvania	5.3	9.7	10.2	10.5	11	9.8	9.1	11.7	10.2
Delaware	.....	10	10	11.5	12	14	13	12	12
Maryland	10	9.5	9.1	10.2	9.5	12.1	10.4	10.5	9.7
Virginia	31	10	10	13	13.4	17	16	12.1	11.3
North Carolina	17.6	10.1	10	9	9	11.3	11.8	8.5	8.5
South Carolina	38.2	8.9	7.2	8	9.2	10	7.8	8	6.4
Georgia	26.5	10.2	9.5	8.6	8	10	9.5	9.6	6.4
Florida	.....	11.7	11.7	.....	.....	12.6	12.3	10	10
Alabama	5.5	10.3	9.6	8.7	4.5	8.7	3	8	7.1
Mississippi	34.4	10.5	10	7.6	4.1	10	1	9	3
Louisiana	37.5	10.5	9.8	11	8.5	8.7	4	10	5.5
Texas	24.2	10.3	10.5	9.1	9.1	8	3.5	8.8	9.5
Arkansas	56.7	11.2	10.6	9	9.7	8	8.4	8.7	9.4
Tennessee	35	10.4	9.8	6	6.7	7.5	5.6	6.5	6.2
West Virginia	14	10.3	10	13.6	15.1	15.5	15.9	12.2	12.7
Kentucky	10	10	10.1	13.3	12.5	10.5	10.7	11.2	10.6
Missouri	17	10	10.5	13.4	12	13	12.7	12	11.8
Illinois	4.5	10.2	10	12.5	11.1	15.2	14.1	12.5	11.2
Indiana	7	10	9.6	14	12	12.4	11.1	12.6	11.5
Ohio	4	10	10.3	18	16	25	23	20	16
Michigan	9	9.7	10.2	13.7	12.6	21	17	11	13
Wisconsin	12	8.6	10.4	14.2	14.3	.....	.....	15	15.6
Minnesota	8	8.2	10.5	11	11.5	10	10	10	10
Iowa	12	8.6	10.5	13.5	11.9	16.9	13	14	12.6
Kansas	9	8	11.2	14.4	12.8	9	11.1	11.4	10.1
Nebraska	12	8.7	11	14.4	12.4	27	24	14	13

REMARKS IN EXPLANATION OF THE ABOVE TABLES.

Wheat.—Rarely has a season been noted in which so few complaints have been uttered by farmers, and so much cheerfulness expressed, in view of the prospect for a wheat crop. Few of our correspondents make any mention of winter-killing, of insects, or of rust. In some parts of the south there has been some complaint of rust, but it has been mainly confined to the leaf, while the grain was so nearly ripe as to be little liable to attack. The harvest has been gathered in Georgia and the other Gulf States, with a very gratifying result.

The acreage of winter wheat is as large in a majority of the States as last year, though it is less in a few of the principal wheat-growing States. Texas, Kansas, Ohio, Indiana, report a diminished acreage; Virginia, Georgia, Arkansas, Tennessee, a largely increased breadth; the New England States show a slight increase; the middle States a similar advance, not exceeding six per cent.; the southern wheat-growing States an average increase of twenty per cent.

In point of "condition," the facts are still more encouraging. Ohio reports an average improvement upon last year of 160 per cent.; Indiana, 73 per cent.; Illinois, 15 per cent.; Michigan, 80 per cent.; Wisconsin, 22 per cent.; Minnesota, 7 per cent.; Missouri, 39 per cent.; Kentucky, 53 per cent.; Virginia, 100 per cent.; North Carolina, 40 per cent.; Tennessee, 53 per cent.; and other States, with the exception only of Texas, making a favorable comparison with last year.

The acreage of spring wheat is largely increased; in Ohio, 37 per cent.; in Indiana, 48 per cent.; in Illinois, 25 per cent.; in Minnesota, 35 per cent.; in Wisconsin, 15 per cent.; in Michigan, 16 per cent.; in Missouri, 31 per cent.; in Iowa, 28 per cent.; in Kansas, 30 per cent.; in Nebraska, 90 per cent. This increase of breadth, in the wheat-growing region, must tell very perceptibly upon the aggregate yield, if no unusual casualty awaits the maturing crop.

It is quite too early to estimate in bushels the final result of the harvest. If the conditions continue favorable, however, at least two hundred millions of bushels may be expected in all the States and Territories.

Barley.—An average acreage of winter barley has been sown in a majority of the States. A decrease of five per cent. is estimated for New York; Ohio, eight per cent.; Indiana, three per cent.; an increase in Tennessee of ten per cent.; and in Arkansas of twenty-five. On the whole, there is a very slightly diminished breadth of winter barley, but the increase of the spring sowing will compensate for the deficiency.

Clover.—The condition of clover is good throughout the country—unusually fine in Ohio and the middle and New England States; in Pennsylvania it is somewhat better than in New York, and in Maine and Massachusetts comparatively more flourishing, as compared with last year, than in the remainder of New England.

Oats.—The acreage of oats is larger than usual; in the west Ohio is the only State which cannot show an increase. The crop is somewhat variable in condition; in the south, far above an average; in New York, ten per cent. below; in Pennsylvania, six per cent.; in Kentucky, fourteen per cent. In the west generally the prospect is better than last year.

Wool.—In the principal wool-producing States, as will be seen, but a small quantity of wool is yet on hand.

EXTRACTS FROM CORRESPONDENCE.

LOCUSTS.

Wilkesboro', N. C.—While writing I may as well tell you something about the locusts—the mysterious war-winged insects visiting us once only in seventeen years, and then coming by stealth in the night time, and often "holding high carnival" for forty days, falling exhausted in the fields and roadways, to be consumed by the hogs, birds, and ants. These noisy little strangers have made their appearance in a wide belt of country a few miles northwest of this town, extending far northeast and southwest, embracing the Blue Ridge and running with it, and being from thirty-five to forty miles broad; the western limit being near the foot of the Stone mountain. The "oldest inhabitant" states that this identical belt of country was visited by them, as now, in 1850, and not since, and it is a subject of remark, and excites our wonder that the line as drawn then is identically the same now. Hogs were the first to herald the approach of the millions, and they have been the gainers by the discovery, as the delicate, sweet, fleshy morsels have kept the swine greasy enough for pork the whole time since frost came out of the ground. Hogs feed upon them to advantage till they crawl up a tree or fence, where they split on the back and come out flies, after which the exhausting, dying process renders them innutritive, and some say pernicious. They are now well established in their leafy home, and a more disorderly, noisy assembly never congregated. Hunters say that deer and other timid game avoid the locust belt when it is in eruption. I am informed that beyond this belt for a considerable distance locusts have never been seen. Is it because of the proximity and contact with limestone?

THE COTTON AND BOLL WORM.

Parish of Jefferson, La.—Allow me to call your attention to the destruction of the cotton crop by the worms, which appear to increase yearly. In 1864 I planted about one hundred acres in cotton. In July the worms made their ap pearance. Having no experience in raising this crop, I searched in the agricultural reports for information. Mr. Glover recommended the burning of trap lanterns, and I made three of them with a coal-oil lamp and tin basin, with soapsuds underneath, and burned them every night. The first night I caught about seventy-five millers and innumerable other insects. The number increased to three hundred millers, and then gradually diminished to none. For three weeks after the crops of my neighbors were destroyed I found only a few of my plants attacked; about the last week of the three I caught no millers, but all at once the catch was seventy-five, next night one hundred and fifty, then three hundred, and even up to five hundred. The worm, however, gradually made its appearance more and more, until in the middle of August my cotton was stripped of every leaf and bloom. The worm then turned in pupa. In ten days after this the miller again appeared. Meanwhile the cotton had sprouted again, and was in full bloom when the third brood made its appearance in immense numbers. In three days every leaf and young boll was eaten, and the worm was eating the bark of the plant and the glazed protection of the nearly-matured bolls. The heavy rains of September soaked into the bolls and rotted them. I made only three bales of cotton. In July the prospect was good for at least seventy-five bales. My opinion is that if every planter would commence burning a lantern in each five acres from the latter part of June to the middle of September for a few years in succession both the boll and cotton worm would be destroyed. The boll worm destroys about one-half the crop with us. This year none of my neighbors raise cotton. I have planted about five acres, and shall burn one lamp and inform the department of the result. Cost of

lantern and basin about $1 50, and the oil will not cost over $1, so that if the increase is only ten pounds of cotton to the acre it will more than pay the extra expense. The first night I used the lantern on a barrel, but the insects were alive in the morning, and it was considerable trouble to kill them. Afterwards I used the soapsuds, as it killed all the insects at once.

MILK SICKNESS IN CATTLE.

New York City.—Investigation which I have recently made induces me to think that the cause of "milk sickness" in cattle is not any one weed poisonous *per se*, but a chemical combination between the dew, the plant, and the atmosphere, whereby a solution is found which is either *per se* a dilute hydrocyanic acid, or becomes such in the stomach of the animal. I have not now the opportunity for practical investigation of the subject, but it occurred to me that the idea suggested might be worthy the attention of the department, and a fit subject for the observation of some of your western correspondents.

A RAT HUNT.

A correspondent writes us from Vermillion county, Illinois, "that the Farmers' Club, of Elwood township, recently resolved upon a general rat hunt. The members were divided into two parties with captains, who also divided the territory of the county. At the termination of the hunt the number of tails counted reached 4,671, and the total number killed was 7,400. The participants with their wives—numbering in all about 200—took dinner at the expense of the party killing the smallest number." The correspondent adds: "The damage that would have been done by these rats in one year, allowing an ear of corn per day to each rat, would amount to over $6,500 for corn alone; and it is reasonable to suppose that this sum would be doubled, were we to include all other damages. Dividing the amount among the persons taking part in the hunt, it would pay all their taxes and leave a surplus sufficient to repair district schoolhouses and furnish large bells for the same. Let other communities try a rat hunt, and they will have fine sport, sure remuneration, and unmolested sleep at night."

SORGHUM IN CONNECTICUT.

Lyme, Conn.—The amount of sorghum molasses manufactured in this part of New London county for the year 1866 is as follows:

J. F. Laplace, Lyme, (oldest mill)	5,000	gallons.
Gideon Rogers, Lyme, (new mill)	1,700	"
W. and A. Gorton, Waterford	1,300	"
Luce Brothers, East Lyme	1,600	"
Total	9,600	"

Dr. Liffingwell, Norwich, has a small mill, but the quantity of molasses manufactured is unknown.

"THE DOG NUISANCE."

Giles county, Tenn.—I wish you would urge Congress to pass a "dog law." Negroes who have not a month's rations on hand keep from two to five worthless curs. My nearest neighbor has three families of negroes living with him, and I am told there are fifteen dogs on the place. As the production of cotton will probably continue to fall off, it is important to encourage the growth of wool. * * * Should the hog cholera increase, and no remedy be discovered, we must grow beef and mutton instead of hogs.

SHEEP RAISING.

Livingston county, Illinois.—Our first year's experience in keeping sheep, dating from August, 1865:

	Dr.		Cr.	
Cash paid for eighty-three sheep	$277 65			
Seven tons of hay	35 00			
One hundred twenty-five bushels of oats	18 75			
Shearing expenses	20 00			
Interest	27 76			
		$379 16		
Thirty-five lambs raised			70 00	
Wool, 400 pounds at 48 cents			192 00	
Three pelts			3 00	
Three sheep consumed by family			12 00	
Eighty sheep on hand at $3 50 per head			280 00	
				557 00
Net profit				177 84

We prefer a good grade Merino to either Cotswold, Southdown, or Leicester.

BEST MODES OF CULTURE.

Oceana county, Michigan.—In looking over agricultural papers and reports I am sometimes surprised that a very natural and efficient mode of culture of some of our most common productions is not recommended. I have only a garden here, and the land is light-drifting sand, and not favorable to experimenting, but in the southern part of our State I have marked the results of different modes of cultivation. To cut off the seed end of potatoes and plant the stem end is as natural as to serve corn so, and the result is very advantageous; also with cucumbers, squashes, or anything from which we save the seed, the stem end is best. I find in planting peas, that by covering them six or eight inches deep they will continue to blossom and bear as long as we want green peas. In transplanting trees, setting them to the same point of the compass as occupied before removal makes a striking difference in the growth. So on through the whole course; to observe nature's laws is a great advantage.

POULTRY DISEASE.

Washington, Iowa.—There is a disease prevalent here among our poultry which I have not seen noticed in any agricultural journals. It goes by the name of cholera in this vicinity. Often the first evidence we have of the existence of the disease is in finding chickens lying dead in the morning where they had fallen from their roost. My turkeys and chickens have just got through with it. I watched the symptoms closely. The eyes look dull and heavy, and the small feathers on the top of the head ruffle up and appear to stand on end. The sick huddle closely together. When the fever comes on they pant considerably and want water. Their dung is quite soft, and about two-thirds of it as white as chalk, the remainder being a bright green. They usually die in from twenty-four to forty-eight hours; sometimes they lose the power of moving when they live longer. I never knew one to recover. Geese and turkeys have it as badly as chickens. When a flock is attacked about two-thirds usually die. The disease started soon after the hog cholera prevailed here. If any of your readers can suggest a remedy we should be pleased to hear from them through the Monthly Report. Horses have also had a similar complaint, which has been

cured by giving them salt and water to drink. * * * The fruit buds of the apple tree are covered with a very small green bug, having six legs and two antennæ.

CROP PROSPECTS IN GEORGIA.

Homer, Georgia.—The prospects were never more flattering in this section for a bountiful yield of wheat and corn, though the rust has made its appearance in the wheat in some places. Don't you think that it would be an advantage if our farmers would order their seed wheat from the north, say from the valley of Virginia, to sow next fall? I think so, from the fact that there has not been a change in seven or eight years; the same wheat has been sown every year, and rust and smut have appeared in it annually. Please give your opinion in the Monthly Report.

[A change of seed would undoubtedly be beneficial; and as the wheat zone extends far north of Georgia, seed from a more northern locality, say Maryland or Virginia, would prove an advantage. Our correspondents uniformly report favorably of the Tappahannock wheat distributed from this office.—EDS.]

PEACHES IN DELAWARE AND MARYLAND.

A letter from the venerable John Jones, of Middletown, Delaware, says:

The season has now arrived when fair estimates may be made of the growing crops; and I am glad to inform you that the apple crop of Delaware, as well as peaches, wheat, oats, and hay, never looked more promising. I attended a convention of peach growers of Delaware a few days since, at Dover, and from the best estimate that could be arrived at the peach crop of Delaware and the eastern shore of Maryland was placed at 3,000,000 baskets.

CROP ITEMS.

A correspondent writing from Greensboro, Georgia, says: "Some of our planters have been compelled to cut their wheat to feed their horses and mules, which I deeply regret, as we want all the cereals to feed our half-starved and suffering people."

Another correspondent, writing from Milledgeville, Georgia, writes that the corn crop of his locality is very unfavorable, the "bud worm" being unusually destructive to the young plant, it striking through the centre of the bud and destroying it.

De Vall's Bluff, Arkansas.—Wheat, rye, and oats are nearly a total failure here, from the rust, caused by the excessive wet spring, much rain having fallen since January, and everything is very backward; and should it be followed by drought as usual, there will be great destitution.

METEOROLOGY.

APRIL AND MAY, 1867.

Table showing the highest and lowest range of the thermometer, (with dates prefixed,) the mean temperature, and amount of rain, (in inches and tenths,) for April and May, 1867, *at the following named places. The daily observations were made at* 7 *o'clock a. m. and at* 2 *and* 9 *p. m.*

[Compiled in the Department of Agriculture from the reports made by observers for the Smithsonian Institution.]

States and places.	April, 1867.						May, 1867.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
MAINE.		°		°	°	*In.*		°		°	°	*In.*
Steuben	16	59	13	26	38.8	5.66	28	70	3	31	47.4	7.50
Lee	.....	.....	.....	.....	.....	.....	29	70	4	31	53.0	6.10
Prospect	29	60	14	26	41.0	.....	.....	.....	.....	.....	.....	.....
Williamsburg	16, 26	52	14	19	35.7	4.30	28	65	3	29	46.1	8.40
West Waterville	20	67	13	29	41.4	3.42	28	71	4	34	51.6	4.87
Gardiner	16, 21	56	13	28	41.0	4.96	28	69	4	36	51.3	5.27
Lisbon	.....	.....	24, 28	32	.....	4.65	.....	.....	.....	.....	.....	8.76
Webster	16, 21	58	13	27	39.9	.....	.....	.....	.....	.....	.....	.....
Standish	21	62	14	28	41.5	4.53	27, 28	74	3	34	52.1	5.26
Rumford Point	16	65	12	21	39.8	3.80	28	74	4	30	52.1	7.45
Cornish	15, 20	60	14	24	40.4	4.34	28	72	3, 4	32	49.8	4.09
Cornishville	16, 20, 23, 26	57	13	27	40.5	3.98	25, 28	72	3	32	50.6	3.49
Averages	.....	.....	.....	.....	40.0	4.40	.....	.....	.....	.....	50.4	6.12
NEW HAMPSHIRE.												
Portsmouth	25	63	13	30	46.2	5.31	28	71	4	32	53.5	3.31
Stratford	20	59	14	16	36.4	4.07	25	68	3	26	47.0	6.23
North Barnstead	15, 19, 26	64	27	30	43.6	3.95	28	72	3	34	51.1	3.72
Concord	15	65	6	28	43.5	3.75	25, 28	72	3	32	54.0	3.92
Claremont	15, 16, 26, 27	60	14	24	43.4	3.91	.....	.....	.....	.....	.....	.....
Averages	.....	.....	.....	.....	42.6	4.20	.....	.....	.....	.....	51.4	4.30
VERMONT.												
Lunenburg	.....	.....	.....	.....	.....	.....	22	72	4	24	49.1	10.38
North Craftsbury	20	58	13, 14	25	35.9	.....	25, 28	64	3	28	47.3	6.88
Randolph	15, 26	60	14	19	39.3	4.17	28	72	3, 4	28	50.7	6.03
Middlebury	26	67	13, 14	28	41.5	4.51	1	70	3	31	51.7	7.19
Brandon	15	65	13	28	43.2	4.36	21	75	3, 4	32	53.2	7.62
Barnet	.....	.....	.....	.....	.....	.....	29	73	12, 17	42	54.3	6.15
Averages	.....	.....	.....	.....	40.0	4.35	.....	.....	.....	.....	51.1	7.38

Table showing the range of the thermometer, &c., for April and May—Cont'd.

States and places.	April, 1867.						May, 1867.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
MASSACHUSETTS.		°		°	°	*In.*		°		°	°	*In.*
Kingston	30	70	14	25	43.4	2.00	25	68	4	33	50.7	4.25
Topsfield	15	66	13	34	49.0	2.15	25, 28	72	3	37	55.5	3.67
Lawrence	15	67	14	31	44.5	2.81	27, 28	71	3, 4	34	50.4	3.46
Georgetown	.....	.....	.....	.....	.....	.....	28	72	4	32	52.9	.....
Newbury	15, 30	68	14	27	44.5	.....	30	74	3, 4	33	53.7	.....
North Billerica	15	69	14	30	.....	.....	25, 30	77	3, 4	32	54.7	.....
West Newton	15	76	29	26	41.1	.....	25	80	3, 4, 5	38	55.4	.....
New Bedford	21	65	13, 28	33	45.7	3.48	28	73	3, 4	38	53.5	3.67
Do	21	66	13	32	47.1	3.04	28, 29	75	4	36	55.2	3.70
Worcester	15	69	14, 24	30	46.5	2.56	28	75	4	36	54.3	4.91
Mendon	15	67	14, 28	32	44.3	.....	28	77	3, 4	33	53.6	.....
Lunenburg	15	65	14	29	44.6	2.10	28	76	4	34	53.3	8.10
Amherst	15	66	14	29	45.5	3.79	28	76	3	36	54.1	4.61
Richmond	8	64	3, 7, 21, 29	30	44.6	7.59	28	80	3	28	54.4	9.47
Williams College	15	68	13, 14, 28	32	44.6	3.96	6	68	3	32	51.6	5.90
Averages	.....	.....	.....	.....	45.0	3.35	.....	.....	.....	.....	53.6	5.17
RHODE ISLAND.												
Newport	19, 26	63	14	30	44.0	2.34	29	78	3, 4	35	53.3	3.29
CONNECTICUT.												
Pomfret	15	67	14	29	44.2	2.26	28	74	3	33	52.7	5.07
Columbia	8, 13, 15, 21	64	28, 29	32	46.5	.....	27	80	3	35	54.0	.....
Middletown	8	69	14	33	49.2	2.44	28	81	4	36	55.9	4.53
Colebrook	15	69	28	28	44.1	.....	28	76	2	32	57.4	.....
Groton	.....	.....	.....	.....	.....	2.39	.....	.....	.....	.....	.....	.....
Averages	.....	.....	.....	.....	46.0	2.36	.....	.....	.....	.....	55.0	4.80
NEW YORK.												
Moriches	19	70	12	36	50.9	1.33	29	80	3	37	57.5	5.64
South Hartford	26	67	14	30	47.7	4.39	29	75	2	38	56.7	8.50
Troy	15	68	13	33	45.9	3.21	29	73	3	34	53 8	5.74
Germantown	15	72	14, 28	34	48.5	6.90	29	81	3	34	55.7	8.60
Garrison's	15	71	28	33	48.0	3.14	29	81	3	34	55.6	7.86
Throg's Neck	13	74	28	38	49.8	.....	29	82	3	37	55.8	.....
Deaf & Dumb Ins'n	15	68	3	37	48.8	2.47	29	79	3	35	52.8	5.70
Columbia College	15	71	27	38	49.8	1.96	29	81	3	37	55.6	3.94
St. Xavier's College	15	66	28	38	50.4	2.85	29	84	3	42	57.0	5.75
Flatbush	8	65	9	33	49.5	2.94	27	81	3	35	55.0	4.02
Newburgh	15	74	6	36	50.7	1.49	29	80	3	35	56.6	5.57
Gouverneur	15	70	13	27	42.3	4.42	25	69	3	31	50.3	6.92
North Hammond	15	68	6	24	41.3	5.60	25	72	3, 4	32	50.6	8.00
South Trenton	15	70	3	26	40.3	6.09	29	70	3	28	47.3	7.62
Cazenovia	15	72	6, 11	28	43.2	5.09	28	79	2	28	51.0	.....
Oneida	15	70	6	31	44.4	7.39	29	75	2, 3	32	50.6	12.61
Houseville	15	67	6, 11	26	41.2	5.78	29	72	3	22	48.2	6.82
Depauville	15	68	6	28	42.1	3.95	21	68	3	30	48.9	5.90

Table showing the range of the thermometer, &c., for April and May—Cont'd

States and places.	April, 1867.						May, 1867.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
NEW YORK—Con'd.		°		°	°	*In.*		°		°	°	*In.*
Theresa	30	58	.....	.....	.....	4.36	.....	.....	.....	.....	.....	6.90
Oswego	15,20	69	28	29	42.1	3.62	25	69	2,3	32	47.4	6.57
Palermo	.....	.....	.....	.....	.....	.....	29	72	3	27	47.5	6.90
Baldwinsville	16	62	6	28	42.4	.....	.....	.....	3	29	.....	.....
Skaneateles	19	68	27	28	44.7	.....	29	70	2	30	50.8	.....
Nichols	15	72	28	29	46.4	.....	29	83	2,3	32	52.4	.....
Geneva	4	73	28	26	44.4	3.91	29	70	2,3	31	49.7	6.59
Rochester	14	73	27	29	44.0	2.93	25	67	2	28	49.5	5.69
Rochester Univ'ty	15	71	6	29	43.7	2.93	.....	.....	.....	.....	.....	.....
Little Genesee	4	72	3	24	45.3	1.95	29	80	3	24	49.2	8.70
Friendship	.....	.....	.....	.....	.....	.....	29	79	2	26	48.7	.....
Buffalo	14	74	6	29	42.9	3.51	28	65	2	25	47.0	4.26
Averages	.....	.....	.....	.....	45.6	3.84	.....	.....	.....	.....	51.9	6.73
NEW JERSEY.												
Paterson	15	75	12	35	50.9	2.78	29	86	3,4	37	56.3	5.97
Newark	15	74	28	33	50.6	2.58	29	80	4	35	55.3	6.55
New Brunswick	22	78	3	36	49.4	1.99	.....	.....	.....	.....	.....	.....
Do	.....	.....	.....	.....	.....	.....	29	83	3	40	56.6	6.45
Trenton	22	74	3,24	40	55.5	0.93	29	83	4,6	40	60.8	5.32
Burlington	22	82	3, 6, 7, 24, 28, 29	40	53.0	1.85	29	84	3	37	57.7	8.50
Moorestown	22	81	28	37	51.3	1.41	29	85	3	36	56.8	7.38
Mount Holly	22	78	12, 28, 29	39	52.0	.....	29	83	4	34	57.4	.....
Scaville	22	69	28	32	53.6	7.90	29	86	3	32	57.6	9.60
Dover	13	75	30	35	50.3	2.80	29	80	3,5	37	55.5	6.71
Readington	22	76	4	33	52.7	.....	29	86	4	30	60.4	.....
Haddonfield	22	79	28	36	51.5	1.76	29	85	3	37	56.6	6.48
Greenwich	22	82	28	38	53.5	0.95	29	86	3,4	40	58.9	6.89
Averages	.....	.....	.....	.....	52.0	2.50	.....	.....	.....	.....	57.5	6.99
PENNSYLVANIA.												
Nyce's	15	69	3	28	44.6	3.32	29	83	3	30	50.9	11.00
Fallsington	22	78	5	37	52.0	1.20	29	85	3	37	56.7	7.75
Philadelphia	22	80	3,28	39	53.2	1.36	29	87	3	39	58.5	7.07
Germantown	.....	.....	.....	.....	.....	.....	29	88	3	36	60.4	.....
Horsham	22	79	3,29	38	50.9	1.38	29	82	3	38	53.7	6.67
Dyberry	4	70	12	26	43.6	.....	29	80	3	28	50.0	.....
North Whitchall	22	80	2,7	28	49.5	.....	29	78	4	30	54.3	.....
Parkesville	22	76	7,28	36	51.6	2.36	29	88	4	36	56.9	8.42
Stevensville	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Reading	22	78	28	37	53.3	.....	29	90	3	38	58.0	.....
Ephrata	15,16	76	24	38	54.2	2.16	29	90	3	38	59.5	8.37
Silver Spring	.....	.....	.....	.....	.....	.....	29	87	3	37	57.0	.....
Mount Joy	22	85	28	36	53.4	0.53	.....	.....	.....	.....	.....	.....
Harrisburg	22	75	24	37	53.9	2.01	29	85	3	40	58.2	5.72
Lewisburg	15	73	24	32	49.5	4.26	29	84	3	35	54.0	8.52
Tioga	15	76	3, 27, 28	26	49.2	4.48	29	83	3	26	49.3	12.40
Fleming	4	72	3, 5	27	46.8	4.28	29	82	3	32	51.5	6.13
Pennsville	4,19	70	6,27	28	45.0	4.37	28	83	3	28	48.8	7.18

Table showing the range of the thermometer, &c., for April and May—Cont'd.

States and places.	April, 1867.						May, 1867.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
PENNSYLVANIA—Continued.		°		°	°	*In.*		°		°	°	*In.*
Connellsville	14	76	6	29	51.3	.....	28	86	3	38	53.7	.....
New Castle	30	69	12	27	48.1	.....	28	81	3	26	51.7	.....
Canonsburg	4	80	6	28	49.4	1.37	28	83	3	36	54.4	5.10
Averages	.....	.....	.....	.....	50.0	2.54	.....	.....	.....	.....	54.6	7.86
MARYLAND.												
Woodlawn	22	74	19	38	52.7	2.78	29	90	3	38	60.0	7.56
Catonsville	15, 22	70	27	34	50.5	.....	29	84	3	38	58.7	.....
Annapolis	22	84	3	38	55.1	2.16	29	87	3, 4	44	60.0	6.64
St. Inigoes	22	78	1	36	56.6	1.56	.....	.....	8	44	61.5	5.56
Emmittsburg	13, 18, 20	75	24	33	52.1	.....	29	82	3, 8	40	57.3	.....
Averages	.....	.....	.....	.....	53.4	2.17	.....	.....	.....	.....	59.5	6.59
VIRGINIA.												
Lynchburg	.....	.....	.....	.....	.....	.....	29	80	8	45	.....	.....
Cape Charles L. H	22	77	3, 6, 12	42	53.4	1.69	29	86	8	40	61.7	5.40
Mount Solon	12, 21	78	5, 6	38	56.3	.....	29	92	1, 3	40	60.8	.....
Hewlett's Station	22	86	29	44	63.6	.....	29	89	2, 8, 16	46	61.8	5.60
Surry C. H	.....	.....	.....	.....	.....	.....	29, 30	90	8	47	65.9	.....
Averages	.....	.....	.....	.....	57.8	1,69	.....	.....	.....	.....	62.6	5.50
WEST VIRGINIA.												
Cabell C. H	14	78	6	40	57.9	2.00	13, 28	82	9	41	60.0	4.80
Grafton	4, 14	82	1, 3, 7	30	55.0	3.13	28	90	9	39	62.7	4.88
Averages	.....	.....	.....	.....	56.5	2.67	.....	.....	.....	.....	61.4	4.84
NORTH CAROLINA.												
Goldsbóro'	22	89	7	41	63.4	4.29	29	95	9	47	69.0	6.86
Oxford	9	81	2	35	61.1	4.60	28, 29, 30	80	8	43	64.3	6.50
Raleigh	22	89	3	36	59.9	3.10	29	93	8	43	66.0	5.80
Albemarle	22	88	7	26	58.1	3.72	28, 29, 30	88	9	34	63.8	9.73
Statesville	22	84	7	28	55.2	4.06	28, 29	84	9	36	60.4	6.19
Asheville	.....	.....	.....	.....	.....	.....	29	82	8	47	62.2	.....
Averages	.....	.....	.....	.....	59.5	3.95	.....	.....	.....	.....	64.3	7.02
SOUTH CAROLINA.												
Aiken	23	82	6	39	61.7	3.83	28, 29	86	7	51	68.9	.....
ALABAMA.												
Moulton	21, 22	80	6	34	60.6	8.95	12	82	8	41	68.2	1.82
Prairie Bluff	22	89	7	43	65.7	.....	12, 27, 28, 29	89	8	47	72.2	.....
Opelika	21	83	2	45	61.8	.....	28	90	8	46	69.9	.....
Havana	21	86	5	39	63.7	4.01	.....	.....	.....	.....	.....	.....
Carlowville	21, 22	84	1, 6	43	67.6	6.37	27	89	8	48	76.8	4.41
Averages	.....	.....	.....	.....	63.9	6.22	.....	.....	.....	.....	71.8	3.12

Table showing the range of the thermometer, &c., for April and May—Cont'd.

States and places.	April, 1867.						May, 1867.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
FLORIDA.		°		°	°	*In.*		°		°	°	*In.*
Fernandina	30	86	3, 6	50	63.3	2.23	10	86	8	50	72.4	2.60
Gordon							12	95	9	48	74.3	
Port Orange	10, 24	83	13	57	72.1							
Averages					67.7	2.23					73.4	2.60
TEXAS.												
Austin	21	92	1	46	67.9	1.45	9	92	1	58	73.9	1.30
Waco	7	83	29	42	60.6	5.80	9	92	1, 7	51	73.0	6.50
Houston							18, 19, 27, 30	94	7	56	75.6	
Columbia	9, 23	93	1	40	71.3	2.70	31	93	7	52	76.3	8.18
Averages					66.6	3.32					74.7	5.33
LOUISIANA.												
Vidalia	29	88	1	46	68.4	12.00	27	94	6	58	73.5	15.00
Benton							27	85	5, 6	58	72.2	
Averages					68.4	12.00					72.9	15.00
MISSISSIPPI.												
Grenada	13	70	6	34			30	80	8	42		
Fayette	21, 29	81	1	40	61.8		27	88	6	53	67.2	
Natchez	29	80	1	37		7.65	27	84	7	50	69.9	11.27
Kingston	3, 17	76	1, 7	43		9.62						
Averages					61.8	8.64					68.6	11.27
ARKANSAS.												
Helena	21	85	1	38	60.4	5.36	27	86	2, 6	48	69.6	7.76
TENNESSEE.												
Tusculum College	21, 30	78	1, 5	39	56.3							
Lookout Mountain	21	80	6	40	58.3		28	84	8	38	64.0	
Clarksville	21	84	6	39	57.6	4.90	4, 12	81	7, 8	40	61.4	4.56
Averages					57.4	4.90					62.7	4.56
KENTUCKY.												
Chilesburg	14, 17, 19	76	6	30	55.5	3.67	28	84	7.8	40	59.4	4.66
Danville	21	85	5	36	57.1	3.63						
Louisville	20	77	6	29	56.7	3.05	28	81	8	32	58.9	6.52
Averages					56.4	3.45					59.2	5.59
OHIO.												
New Lisbon	20, 30	72	6, 12, 28	30	50.2	3.99	29	82	3	36	54.2	4.88
East Fairfield	4	69	6	29	49.7	3.23	28	83	3	29	52.1	4.12
Martin's Ferry	4	76	12	32	52.2		28	85	3	39	54.9	
Painesville	14	72	6	26	45.5		28	78	2	30	50.6	6.12
Milnersville	19	79	3	24	51.3	2.20			2	30		
Cleveland	14	78	11, 27	29	47.1	3.21						
Do	14	77	11	32	50.6		29	78	2	32	53.2	
Wooster	14	74	6	33	51.7							

Table showing the range of the thermometer, &c., for April and May—Cont'd.

States and places.	April, 1867.						May, 1867.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
OHIO—Continued.		°		°	°	*In.*		°		°	°	*In.*
Gallipolis	14	78	6	31	55.9	2.83	28, 29	84	9	40	56.6	4.57
Kelley's Island	14	69	5	32	47.1	3.27	5, 25	66	2	37	52.4	5.08
Norwalk	13	74	6	28	48.4	2.63	4	73	9	32	52.7	2.39
North Fairfield	14	78	6	27	51.5	6.10	4, 29	75	3	33	53.8	7.10
Westerville	14, 19, 30	74	12	31	52.0	1.77	28	83	7	38	56.7	1.62
Kingston	14	78	6	33	52.9	2.21	28	88	7	38	55.9	3.25
Toledo	14	72	6	29	48.6	3.63	30	72	2	36	52.3	5.50
Marion	30	70	6	29	48.9	3.55	28	81	3	37	52.7	3.09
Kenton	19	65	6	34	45.2	4.13	30	72	8	34	47.2	5.31
Urbana University	19, 20	76	1, 6	32	51.2	3.48	28	82	3, 7	38	55.4	2.27
Hillsborough	19	73	6	32	52.3	3.29	28	81	8	38	54.9	3.10
Bethel	19	77	5, 6	30	52.3	1.75	28	80	7, 8	37	56.0	2.75
Cincinnati	19	76	6	34	54.4	2.74	28	80	8	40	58.0	3.80
Do	8	78	6	38	58.4	3.18	28	86	8	42	62.2	4.38
College Hill	20	75	1	30	53.0	3.00	28	84	4	35	55.9	4.15
Farm School	29	73	2	28	51.1	3.25	29	78	7	34	55.2	1.98
Greenwich Station	30	76	5, 6	32	51.3	.....	28, 29	82	3	37	55.4	.....
Bowling Green	14	80	6	28	48.8	3.96	29	78	3	30	54.3	9.50
Averages	.....	.....	.....	.....	50.8	3.21	.....	.....	.....	.....	54.5	4.25
MICHIGAN.												
Monroe City	14	74	11	30	48.4	0.79	30	76	2	38	53.1	2.23
State Ag. College	19	72	11	29	48.2	2.90	30, 31	70	2	30	51.1	3.81
Litchfield	19	75	11	29	47.1	3.95	30	72	3	28	50.6	8.97
Grand Rapids	13	78	5	26	46.7	.....	.....	.....	.....	.....	.....	.....
Otsego	16	70	5, 11, 22, 27	30	46.2	.....	26, 31	70	2	29	48.2	.....
Northport	13	70	9	22	39.9	.....	25	62	2	26	44.1	.....
Alpena	17	52	5	27	.....	.....	.....	.....	.....	.....	.....	.....
Holland	13	70	11	30	45.4	2.55	31	72	2	28	49.8	5.38
Ontonagon	13, 14, 28, 29	60	1, 2, 9, 10, 11, 22, 26, 27	28	38.6	.....	31	60	1, 2	30	42.0	.....
Copper Falls	.....	.....	.....	.....	.....	.....	31	61	2	29	41.2	.....
Averages	.....	.....	.....	.....	45.1	2.55	.....	.....	.....	.....	47.5	5.10
INDIANA.												
Richmond	19	73	6	32	50.0	3.05	.....	.....	.....	.....	.....	.....
Aurora	30	74	6	29	52.8	2.49	.....	.....	.....	.....	.....	.....
Vevay	9	83	6	31	55.7	1.70	30	95	7	35	61.4	4.25
Muncie	19	78	1, 5, 6	33	50.6	2.60	28	81	2	36	54.7	5.08
Spiceland	19	78	2	32	51.3	0.80	.....	.....	.....	.....	.....	.....
Columbia City	19	76	1, 11	32	44.0	.....	28	80	8	37	52.8	5.00
Indianapolis	19	77	6	30	51.4	2.93	31	79	2, 8	36	54.3	.....
Rensselaer	19	72	6	28	46.6	5.75	28	76	2	29	50.0	15.50
Merom	19, 20	72	2, 6	32	51.6	1.80	28	73	7, 8	36	55.8	5.74
New Harmony	19, 21	77	6	30	56.1	2.03	20	80	7	40	61.2	4.62
Averages	.....	.....	.....	.....	51.9	2.57	.....	.....	.....	.....	55.7	8.70

Table showing the range of the thermometer, &c., for April and May—Cont'd.

States and places.	April, 1867.						May, 1867.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
ILLINOIS.		°		°	°	*In.*		°		°	°	*In.*
Chicago	3	74	22	30	47.5	.....	28	80	7	32	51.7	.....
Do	13	71	2	33	46.4	1.70	28	73	2, 6	38	51.4	4.22
Golconda	30	94	26	26	59.9	0.70	21	92	8	30	67.5	6.00
Aurora	18	67	5	29	45.3	2.39	30	71	2	30	46.6	5.24
Sandwich	19	72	5, 6, 11	30	46.6	2.45	30	73	2	29	50.9	7.58
Ottawa	19	78	5	33	50.6	1.72	28	80	3	32	52.8	4.64
Winnebago	19	70	5	28	45.0	1.43	30	77	2, 6	32	49.4	4.65
Dixon	12, 29	72	2, 6	26	48.4	.....	31	79	2, 7	30	51.1	.....
Hennepin	18	76	6	28	48.0	.....	31	75	3	29	52.0	.....
Magnolia	7	80	6, 11	28	48.5	2.00	30	85	7	28	52.5	10.00
Lacon	18	76	2, 5, 6	30	50.8	2.81	.....	.....	.....	.....	.....	.....
Rochelle	18, 19	72	1, 2, 6, 11	28	47.3	.....	28, 30	76	2, 7	34	51.0	.....
Wyanet	18	71	1	27	47.8	2.00	30, 31	74	7, 8	31	52.0	6.62
Tiskilwa	19	74	1	27	48.3	.....	31	75	7	34	52.3	.....
Elmira	18	73	5	30	49.5	2.27	31	78	6	35	53.0	6.41
Peoria	18	73	2	30	51.1	1.57	31	75	7	35	55.2	4.40
Springfield	19	74	6	28	49.4	.....	12	84	6, 7	34	55.0	.....
Loami	18, 19	80	2	32	52.4	0.45	4	79	7	34	56.5	5.40
Waterloo	19	79	1	33	53.1	.....	20, 31	78	8	36	60.1	.....
Dubois	21	79	6	25	48.8	1.15	30	88	8	22	52.8	5.90
Galesburg	18	72	10	28	48.1	1.16	30, 31	74	6	36	50.3	6.38
Manchester	21	78	2	30	52.8	0.47	30	76	6	38	56.8	5.45
Mt. Sterling	19	81	5	33	53.2	.....	31	80	6	35	58.6	.....
Andalusia	18	75	1	26	48.0	.....	31	78	7	33	51.9	.....
Augusta	18	74	2	31	52.6	2.00	31	72	6	37	57.5	4.99
Averages	.....	.....	.....	.....	49.6	1.64	.....	.....	.....	.....	53.8	5.86
WISCONSIN.												
Manitowoc	25	62	5	27	42.2	2.00	23	62	2	30	46.7	2.26
Plymouth	14, 16, 17	65	4, 9	28	43.9	1.70	24	69	2	30	49.0	3.10
Milwaukee	29	65	5	28	42.9	1.73	24	70	3	28	46.6	4.39
Do	12	66	5	31	44.0	1.75	24	70	3	32	47.3	5.53
Geneva	.....	.....	.....	.....	.....	.....	31	70	2	30	49.7	.....
Delavan	19	69	1	27	44.2	1.09	31	67	2	30	48.2	3.60
Waupacca	19	69	5	25	45.3	.....	30	71	2	30	50.4	.....
Do	16, 19	68	9, 11	18	40.5	3.70	26	68	2, 3	26	47.7	2.70
Embarrass	19	72	8	25	41.2	2.41	27	74	2	23	46.1	1.38
Rocky Run	19	67	5	29	44.7	2.78	30	70	2	31	43.3	3.94
Beloit	18, 19	68	5	28	46.5	.....	30	74	2	32	49.6	3.84
Baraboo	16	74	9	26	45.0	6.25	31	74	12	30	49.7	6.19
New Lisbon	19	74	2, 9	25	46.1	.....	11, 31	73	2	32	51.2	.....
Bayfield	12, 19	64	9, 27	26	42.0	.....	.....	.....	.....	.....	.....	.....
Appleton	13	67	27	27	43.8	2.15	27	72	2	28	48.5	2.20
Averages	.....	.....	.....	.....	43.8	2.56	.....	.....	.....	.....	48.2	3.56
MINNESOTA.												
Beaver Bay	16	62	2, 5, 10	25	38.2	1.43	29	67	1	25	44.9	1.64
Afton	17	67	2	19	42.0	.....	30	76	1	27	47.8	.....
St. Paul	17	60	2	17	40.2	2.93	30	76	6	30	49.7	4.45
Minneapolis	19	64	2	21	41.4	0.40	30	70	1	28	48.5	3.63

Table showing the range of the thermometer, &c., for April and May—Cont'd.

States and places.	April, 1867.						May, 1867.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
MINNESOTA—Continued.		°		°	°	*In.*		°		°	°	*In.*
Sibley	25	60	2	7	37.9	1.82	.....	.....	.....	.....	.....	.....
New Ulm	19, 28	64	2	13	44.4	1.73	30	78	1	29	52.0	3.72
Red Wing	12	67	8	25	42.7	2.68	.....	.....	.....	.....	.....	.....
Averages	.....	.....	.....	.....	41.0	1.83	.....	.....	.....	.....	48.6	3.36
IOWA.												
Clinton	18	68	2	20	46.0	1.75	30	78	6	34	52.4	7.00
Davenport	18	70	1, 2	30	47.5	3.91	.....	.....	.....	.....	.....	.....
Dubuque	18	71	5	29	47.6	1.32	30	77	6	36	52.1	3.10
Atalissa	18	73	5	29	46.0	2.83	31	78	6	33	51.0	5.33
Monticello	16, 18, 19	70	1	30	46.8	1.25	30	78	6	35	52.9	4.67
Fort Madison	18	75	2, 6	27	48 6	3.25	31	81	6, 7	33	53.7	5.88
Guttenberg	18	76	2	23	43.3	.....	30	80	7	27	48.4	.....
Ceres	18	72	1, 4, 5	30	46.7	.....	30	78	2	28	51.1	.....
Mount Vernon	18	75	2	20	45.2	.....	30	75	6	30	50.3	.....
Iowa City	18, 19	70	1, 2, 6	27	47.1	0.95	30	79	6	31	51.9	10.60
Independence	18	76	1	24	44.1	3.10	30	79	2	29	50.8	6.20
Do	18	70	1	27	44.5	.....	30	78	6	34	51.0	7.95
Waterloo	18	70	1, 2	26	44.5	.....	30	76	5	32	51.0	.....
Iowa Falls	19	72	1	10	37.8	2.14	17	64	2, 6, 7	30	46.6	7.64
Algona	19	61	9	16	38.9	.....	30	77	2, 6	30	50.1	.....
Do	28	62	9	16	40.2	.....	30	73	6	21	51.1	.....
Fontanelle	12, 19	68	5	27	44.4	2.50	3	78	6	36	53.6	6.63
Harris Grove	12	67	9, 11	23	43.4	1.60	3	80	6	29	52.0	4.50
Fort Dodge	12	64	9	22	40.9	1.37	30	75	6	31	51.6	4.07
Dacotah	28	66	7	12	38.8	.....	30	78	2	30	51.9	.....
Marble Rock	.....	.....	.....	.....	.....	.....	30	77	.....	.....	52.3	.....
Averages	.....	.....	.....	.....	44.1	2.16	.....	.....	.....	.....	51.3	6.13
MISSOURI.												
St. Louis Univer'y	21	82	2, 6	39	56.3	0.69	4	80	7	46	60.9	5.95
Allenton	21	91	6	28	55.0	0.89	3	87	7, 8	36	59.5	7.86
Union	21	86	1	34	56.2	1.14	4	83	7	44	61.5	7.05
Canton	18	73	2, 11	31	49.3	2.50	31	73	2, 7	36	57.1	3.20
Harrisonville	20	80	5,6,10,11	34	52.1	4.91	3,8,10,14	78	13	45	58.6	10,64
Oregon	12	72	1	27	51.2	2.49	3, 8	82	2	38	58.3	5,84
Averages	.....	.....	.....	.....	53.4	2.10	.....	.....	.....	.....	59.3	6.76
KANSAS.												
Leavenworth	18	79	6	25	51.1	2.77	8	90	6, 7	30	58.0	6.25
Olatha	20	78	5, 10, 11	32	50.1	.....	3	80	5	37	57.9	8.40
Atchison	21	75	11	29	49.1	5.40	10	87	6	34	57.8	4.75
State Agric. College	13, 21	75	5, 10	31	50.2	2.44	8	93	2	41	59.2	3.59
Le Roy	20	87	6	28	55.3	1.52	8, 9, 30	90	5	46	64.6	12.01
Council Grove	21	77	11	28	50.3	2.70	8	91	6	36	60.5	7.15
Lawrence	20	72	5	30	48.9	4.81	8	78	6	37	55.5	9.38
Holton	.....	.....	.....	.....	.....	.....	8	89	2	42	59.0	.....
Averages	.....	.....	.....	.....	50.7	3.27	.....	.....	.....	.....	59.1	7.36

Table showing the range of the thermometer, &c., for April and May—Cont'd.

States and places.	April, 1867.						May, 1867.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
NEBRASKA.		°		°	°	*In.*		°		°	°	*In.*
Elkhorn	28	70	5	26	44.0	.....	3	84	2	34	54.9	.....
De Soto	28	69	9	21	44.5	.....	3	83	1	30	55.9	8.20
Bellevue	20	79	4, 5	30	46.6	1.78	.....	.....	.....	.....	.....	.....
Glendale	12	73	9	27	45.7	2.80	3	85	5, 6	35	55.3	8.25
Averages	.....	.....	.....	.....	45.2	2.29	.....	.....	.....	.....	55.4	8.23
UTAH TERRITORY.												
Wanship	20	64	4	16	37.2	.....	.....	.....	.....	.....	.....	.....
CALIFORNIA.												
Monterey	26	85	3	38	57.0	3.68	.....	.....	.....	.....	.....	.....
MONTANA TER'Y.												
Camp Cooke	11, 20, 27	71	4	20	44.8	1.41	.....	.....	.....	.....	.....	.....
OREGON.												
Corvallis	24	68	1	38	.....	.....	.....	.....	.....	.....	.....	.....
Albany	25, 30	75	17	34	53.2	5.20	.....	.....	.....	.....	.....	.....

NOTES OF THE WEATHER APRIL, 1867.

St. Anne, Canada East.—April 1.—Ground frozen this year only to the depth of one foot seven to one foot nine inches; the greatest depth to which it freezes is from two feet six to two feet eight inches.

Gardiner, Me.—April 30.—Mean temperature of the month nearly three quarters of a degree below the average for thirty-one years; the range less than any on record; amount of rain one inch and four-tenths above the average.

Steuben, Me.—April 21.—Thunder and lightning at 5 p. m. continuing till in the night. 30th.—No ploughing done yet; last year potatoes were planted the 10th of April.

Lee, Me.—April 11.—Have had ninety-five days sleighing; it continued good till this day. 30th.—Frost out of ground, except in protected places; farming will be two weeks later than last year.

Cornish, Me.—Amount of snow from November to April inclusive, 113½ inches. Temperature of the month 1°.26 above the average for thirty-five years.

Antrim, N. H.—April 22.—Two thunder storms to-day in connection with the rain. 30th.—The grass is not more forward to-day than it was on the 15th of April last year.

Stratford, N. H.—April 6.—First appearance of robbins. 21st.—First garden violet in bloom.

Middlebury, Vt.—April 30.—The season is late; farmers have ploughed but little; snow is in sight on the Green mountains east, and on the Adirondacks west.

Randolph, Vt.—April 25.—Farmers begin to sow grain. 27th.—Bees bring in pollen.

Lunenburg, Vt.—The month has been cold and backward, with but little snow.

Kingston, Mass.—April 21.—First thunder shower of the season at 1 a. m. 22d.—Heavy thunder shower at 7 p. m.

New Bedford, Mass.—April 28.—Ground frozen a little this morning; ice formed; thermometer 26° early in the morning.

Williamstown, Mass.—April 20.—A very violent thunder storm in the evening. 28th.—Hard frost.

Mendon, Mass.—April 22.—Heavy thunder shower at 6 p. m. 28th.—Ground frozen in the morning; ice an eighth of an inch thick in vessels out of doors. 30th.—Beginning to plough.

Newport, R. I.—April 21.—Thunder shower at 2.30 a. m. 22d.—Thunder and lightning from 6.30 to 8.30 p. m. with rain.

Groton, Conn.—April 22.—Heavy thunder storm passed over this evening about 6 o'clock. 28th.—Ground frozen about an inch in some places this morning.

Columbia, Conn.—April 22.—Thunder shower from 5 to 7 p. m. with wind southwest, and accompanied by zigzag lightning and very heavy thunder.

New York, N. Y.—April 22.—Thunder storm from 3.50 p. m. to 4.25 p. m. from southwest to northeast; much heavy thunder and vivid lightning; some scattering snow flakes for five minutes.

Little Genesee, N. Y.—April 23.—Ground white with snow. 28th.—Thermometer 18° at sunrise.

Rochester, N. Y.—April 28.—Last night was the coldest in the month, freezing the ground to the depth of an inch, and forming ice half an inch in thickness. Temperature at 11 p. m. 28°.

Buffalo, N. Y.—April 30.—Twelve miles of ice yet in this end of Lake Erie, though a few propellers succeed in getting through.

Moriches, N. Y.—April 22.—At 5 p. m. thunder heard in the northwest. At 6¼ p. m. the shower came up. 28th.—Frost and ice this morning.

Nichols, N. Y.—April 3.—First ploughing done. 22d.—Thunder showers at intervals all day; much hard thunder. 24.—Snow began at 5 a. m., two or three inches fell, but it melted nearly as fast as it fell.

Depauville, N. Y.—April 10.—The ice has passed out of the river St. Lawrence, and the first boat of the season went up and arrived at Cape Vincent. 21st.—About sunset yesterday, during the thunder storm, the lightning struck a house about four miles in a northwestern direction from here.

Mount Holly, N. J.—April 22.—Dark clouds came up from southwest about 3 p. m. accompanied by heavy thunder and vivid lightning.

Greenwich, N. J.—April was a pleasant month, free from severe storms. On the 18th ice formed an eigth of an inch thick, and on the 28th there was a heavy frost.

Haddonfield, N. J.—April 22.—Hail at 3.15 p. m. for about five minutes during a shower from the southwest. 28th.—Heavy white frost this morning and ice nearly as thick as window glass.

Newark, N. J.—The average temperature of the first week of April was more than four degrees above that of the last week. The minimum temperature of every April of the last twenty-three years, except one, (1865) was lower. Thunder and lightning accompanied the showers of the 20th and 22d, the latter occasion being simultaneous with a violent tornado in Sussex county.

Lewisburg, Pa.—April 22.—Violent thunder storm a few minutes after 2 p. m., wind west, prostrating many fences.

Philadelphia, Pa.—April 22.—Thunder and lightning, with heavy showers from 3 to 5 p. m. 28th.—Ice formed in the northern part of the city one-eighth of an inch thick.

Fleming, Pa.—The snow disappeared about the middle of the month, the ground was covered for four months in succession, which is a very rare occurrence here.

New Castle, Pa.—April 24.—Snow commenced falling at 3 o'clock a. m., and continued till about 10 a. m. The ground was covered, but the greater part of the snow melted as it fell.

Reading, Pa.—April 20.—Heavy shower, with vivid lightning and loud, rolling thunder between 9 and 10 p. m.

Emmitsburg, Md.—April 22.—From 5½ to 6 a. m. heavy thunder storm; at 2 p. m. heavy rain, accompanied with small hail. 24th.—Snowing from 6 to 11 a. m.; two and a half inches deep. 28th.—Ice a quarter of an inch thick.

St. Inigoes, Md.—Cherries in bloom on the 12th of April, peaches on the 14th, and apples on the 18th, catawba and Isabella grape-vines in leaf on the 22d.

Woodlawn, Md.—April 3.—The snow disappeared to-day, having been on the ground since the middle of December. 22d.—A hail storm from 3.12 to 3.25 p. m. from northwest; 28th, general hoar frost and some ice; ploughed ground frozen.

Mount Solon, Va.—April 21.—Thunder shower, commencing at 12 p. m., a few vivid flashes and sharp peals. 28th.—Very heavy frost, stiffening the young clover leaves and nipping the extremities of young foliage.

Cape Charles Light House, Va.—April 22.—Faint lightning in the western sky at 8 p. m. 24th.—Thunder at 7 a. m.

Attaway Hill, N. C.—April 2.—Pear trees in full bloom. 24th.—Heavy thunder cloud from the southeast during the night. At the distance of about a mile the lightning struck the lowest of two pines, about nine feet apart.

Statesville, N. C.—April 22.—Lightning and thunder, southwest, south, and southeast. Heavy shower of rain and hail.

Wilkinsville, S. C.—April 22.—Thunder west and northwest at 5. p. m. Rain from 8¾ p. m. to 11 p. m.; trees and fences prostrated by the wind.

Opelika, Ala.—April 28.—Thunder, with violent and general rain from 5 to 7 p. m. 30th.—Thunder and violent general rain from 5 to 10 p. m. A tree was struck by lightning and some trees were blown down.

Prairie Bluff, Ala.—Frost on the 2d, 6th, and 7th.

Vidalia Plantation, La.—There were four thunder storms in April, generally severe. The storm on the 30th was exceedingly severe; the wind blew with great violence, prostratinging fences, trees, and some buildings.

Fayette, Miss.—Frost on the 1st and 4th of April; the last of the season. 28th.—First early peas, a month later than usual. The spring is very backward.

Natchez, Miss.—April 30.—1 50 p. m. a violent storm of wind and rain from the southwest, accompanied with terrific lightning and very heavy thunder. 9 p. m. clear, with a fresh northwest breeze.

Kingston, Miss.—April 30.—At 2 p. m. occurred a violent squall, with rain, thunder, and lightning. It was much more violent at Natchez than here. The road from Kingston to Natchez was rendered impassable in many places. The squall came from the westward and prostrated the trees across the road at right angles to it and parallel to one another. Most of these trees were about eight inches in diameter and smaller. The amount of rain during the month (9.62 inches) was greater than the observer ever before registered.

Waco, Texas.—Light frost on the mornings of the 1st and 10th.

Clarksville, Tenn.—April 30.—At 1 p. m. a heavy, pouring rain commenced which for a few moments was mixed with hail as large as boys' marbles. There was considerable thunder during the squall. The rain ceased about 3 p. m.

Lookout Mountain, Tenn.—April 15.—Severe thunder storm, moving from southeast to northwest, late in the p. m.; pine tree struck by lightning. 22d.—Thunder showers in p. m. 30th.—Thunder in the night.

Chilesburg, Ky.—April 26.—White frost this morning, more general than on the 23d and 25th. Fruit trees generally in bloom and but very little injured by the frost. 30th.—Thunder storm at 4 p. m.

Ripley, Ohio.—April 22.—From 12 to 3 a. m. violent thunder and sharp lightning, commencing south, moving to southeast, thence east to northeast, accompanied by high wind and some hail. 25th.—Heavy frost. 27th.—First peach blossoms.

Urbana, Ohio.—April 25.—Thin ice; heavy white frost.

Painesville, Ohio.—April 22.—Snowed a trifle, melted as fast as it fell 24th.—Snowed a trifle again to-day.

Kelley's Island, Ohio.—April 1.—At 12 m. the steamer Star came in from Sandusky, getting to the dock through the ice with some difficulty; left again for Sandusky at 2 p. m., not being able to get to Put-in-bay on account of ice. Schooner Post, which came from Black river March 3d, succeeded this afternoon in getting out of the ice, and left for Cleveland, or any port this side which may be accessible. 3d.—Lights in light-houses for the first time this season. 9th.—Crocus in blossom.

Holland, Mich.—April 22.—Rain and snow the past night; snowing during the day and cold wind. 23d.—Hard frost this morning. 28th.—Ice half an inch thick.

Central Mine, Mich.—Snow from three and a half to four feet deep from early in December till early in April; melted gradually until April 14th, when at the lake level but little remained, and on the ranges in the woods it was from a foot to a foot and a half.

Lansing, Mich.—April 21.—Rain began at 6 p. m., during the night it changed to a fierce northeast snow storm, covering the ground to the depth of five inches.

Vevay, Ind.—April 15.—Peaches in blossom. 30th.—Thunder storm from the northwest 3.45 to 6 p. m.

Waterloo, Ill.—In the night of the 24th and 25th of April ice formed in the lower part of the county, especially throughout the whole American bottom, while on the hills there was hardly any frost, except along the creeks. The same occurred during the night of the 27th and 28th.

St. Louis, Mo.—April 21.—Thunder and lightning in the east at 7¼ p. m.

Waupaca, Wis.—April 27.—Ice a quarter of an inch thick this morning.

Delavan, Wis.—April 16.—Grass pretty generally started. 30th—The buds have started on very few trees yet.

Milwaukee, Wis.—April 4.—Ice left the Milwaukee river. 23d.—First steamer arrived from lower lakes.

Minneapolis, Minn.—Ice broke up in the Mississippi river at this point April 16th. Ground frozen very hard and ice formed a quarter of an inch thick on the night of the 26th.

St. Paul, Minn.—April 22, 23—Heavy flood in the Minnesota and Mississippi; water higher than since 1859.

Algona, Iowa.—April 30.—Snow all gone, except in deep ravines where it drifted to a great depth.

Iowa City, Iowa.—April 24.—Hard frost, ice half an inch thick. Season very backward.

Lawrence, Kansas.—April 20.—Rose bushes, cherry trees, and cottonwood trees coming into leaf. First flower of the season found on the prairie.

Manhattan, Kansas.—April 3.—Frost left the ground; first ploughing

Olathe, Kansas.—April 14.—Heavy thunder storm at 5 a. m.

Richland, Neb.—April 21.—Grass generally starting on the prairies.

Glendale, Neb.—April 24.—Thermometer at 5 a. m. 22°; ground frozen hard.

Aspinwall, Panama.—The mean temperature of the past April at 7 a. m. was 79°.1, at 2 p. m. 79°.2; at 9 p. m. 79°.0; being only one-tenth of a degree higher at 2 p. m. than at 7 a. m. and two-tenths higher than at 9 p. m.

EARTHQUAKE.

A number of the registers from Nebraska, Kansas, Iowa, and Missouri mention the shock of an earthquake in the afternoon of April 24th.

NOTES OF THE WEATHER.—MAY, 1867.

Gardiner, Me.—Mean temperature of the month 2°.92 below the average of May for thirty-one years. Amount of rain 1⅔ inch above the average of twenty-nine years.

Steuben, Me.—The past month was the wettest May except one on record at this station.

Lisbon, Me.—May 31.—There was so much wet weather during the month that farmers have been able to do but little sowing and planting.

Cornish Me.—Temperature of the month about one degree above the average of the last thirty-five years.

Stratford, N. H.—May 19.—Ice thick as window glass this morning.

Lunenburg, Vt.—May was very wet, but all crops, though backward, promise well.

Craftsbury, Vt.—Rain fell on every day during the month except four.

Barnet, Vt.—May 31.—The season is more backward than for several years. The Connecticut river was higher this month than before since 1850.

Kingston, Mass.—May 14.—Thunder shower last night.

Richmond, Mass.—May 31.—The month was cool and very wet. A snow-drift formed in December, remained in sight until the 26th.

Lunenburg, Mass.—The past May was the coldest since 1858.

Newport, R. I.—Thunder storm from 11 p. m. of the 13th to 3 a. m. of the 14th.

Columbia, Conn.—Rain from 9 p. m. of the 13 to 3 a. m. of the 14.

Pomfret, Conn.—The temperature of the month was 1°.6 below the average of fifteen years. In 1853, 1856, 1858, 1861, and 1865 May was colder.

Troy, N. Y.—The mean temperature of the mouth was lower than that of any May during the last eleven years, the period covered by this register.

New York, N. Y.—May 13.—Thunder shower from 10.15 p. m. to 12.30 p. m. The lightning struck a gate post and two porters' lodges, one on each side of the gate and about fifty feet from it, shattering them and setting fire to the post.

Buffalo, N. Y.—The temperature of May was 8⅓° lower than the mean of the month for the nine years during which these observations have been taken.

Rochester, N. Y.—The past May was the coldest recorded at this station, the record extending back to 1837. More rain also fell than in any May, except in 1864.

Morestown, N. J.—On the night of the 13th–14th a hurricane passed through Everham township, five miles from this place. A barn and several orchards were destroyed; path narrow, direction very nearly northeast.

Trenton, N. J.—May 13.—Hail and thunder storm from south at 9 p. m., continued about an hour; a brick house struck by lightning. 14th.—Hail and thunder storm from the southwest at 1.30 p. m., continued about half an hour; a tree struck by lightning.

Mount Holly, N. J.—May 13.—At 11 p. m. a hurricane passed over the centre of the town, from west to east, breaking down a number of large trees, and followed by some hail and very heavy rain.

Newark, N. J.—The mean temperature of the month was 3°.47 below the average of the preceding twenty-four Mays, those of 1858 and 1861 only having mean temperatures lower. The quantity of rain was nearly two and a quarter inches in excess of the average of May for the same period, being exceeded only in 1846 and 1850.

Reading, Pa.—May 13.—Thunder and lightning in the southwest; vivid and violent between 9 and 10 p. m.

Fallsington, Pa.—More rain fell during this month than in any May since the observer has kept a record—nine years.

Philadelphia, Pa.—May 8.—At 10 a. m. the barometer stood at 28.778, reduced to the freezing point, the lowest observed in the last sixteen years. 13th.—From 10 to 10½ p. m. very heavy rain mingled with hail and accompanied by thunder and lightning. 31st.—The mean temperature for the month was about 4½° below the average, and lower than any May in the last sixteen years. The nearest approach to it was in 1858 and 1861. The rain was more than two inches above the average amount, and was surpassed during the last sixteen years only in 1854, 1864, and 1865.

Canonsburg, Pa.—May 13.—Shower at 4½ p. m.

Emmittsburg, Md.—May 13.—At 10 a. m. thunder gust; in the afternoon two showers. At 7 p. m. heavy rain, heavy thunder with vivid lightning continuing until 10 p. m.

Raleigh, N. C.—May 13.—Four thunder showers with hail about 4 p. m., one hail stone as large as a robin's egg; many larger than peas.

Oxford, N. C.—The month too wet for corn and cotton.

Grenada, Miss.—Slight frost on the 7th and 8th of May.

Vidalia Plantation, La.—There were nine thunder storms in May, several of them very severe; four occurred in the morning, and in these cases the thunder continued the most of the day. The month was excessively wet. On the 25th, at 3 p. m., a tornado came suddenly with great fury bearing all before it. It extended from Tensas river to Lake Pontchartrain. The wind was from northwest to southeast.

Chilesburg, Ky.—May 8.—Frost, doing considerable damage to fruit. 13th. At 1 p. m. a thunder storm passed over from west to east; very loud thunder south at 1 p. m. About noon there was a very violent storm at Lexington (fourteen miles west), blowing down trees and breaking windows. Almost constant lightning to-night south and southeast, and very strong wind from west.

Urbana, Ohio.—The season is about thirteen days later than the average. The mean temperature is 6.33° below that of May for the past fifteen years. The amount of rain is less than the average for May, but has been distributed through a greater number of days than is usual for the month.

Kingston, Ohio.—May 13.—The rain storm this p. m. was accompanied with lightning and some wind.

Kelley's Island, Ohio.—May 13.—Thunder shower in the latter part of the night.

College Hill, Ohio.—May 8.—Frost this morning; fruit not injured. 13th.—Two thunder showers, the first from 11 a. m. to 11.30 a. m., the second from 3 to 3.45 p. m.

Kenton, Ohio.—May 13.—Thunder storm with hail at 4 p. m. Two or three trees struck by the lightning.

Holland, Mich.—Frost on ten nights during the month, the last on the night of the 30th. On the morning of the 8th ice a quarter of an inch thick.

New Harmony, Indiana.—May 8.—Frost last night, thermometer 32° in the night. Tomato and potato vines destroyed; also the young shoots of the grape-vines.

Merom, Indiana.—May 8.—Hard frost last night; ice a tenth of an inch thick.

Chicago, Ill.—Ground white with frost on the mornings of the 1st, 8th, and 17th.

Winnebago, Ill.—May 31.—The season is cold and backward; corn which was planted at the beginning of the month is just making its appearance.

Manchester, Ill.—May 12.—Distant thunder from 8 a. m. with light showers; about 5 p. m. heavy thunder from southwest, at the same time distant thunder north.

Aurora, Ill.—May has been remarkably cold, and the season is about ten days later than usual.

Allenton, Mo.—May 7, 8.—Heavy white frost; thermometer 29° at 5 a. m. on the 7th. Strawberry and currant blossoms and young shoots of grape vines injured to a considerable extent.

Harrisonville, Mo.—May 7.—A very light frost this morning.

Rocky Run, Wis.—The mean temperature of the month was about eight degrees lower than the average of May for the last eight years. The season is at least two weeks more backward than usual.

Embarrass, Wis.—May 31.—The month has been very cold and rainy; but rye, wheat, oats, &c. never looked better than they do now.

Milwaukee, Wis.—May has been cold and wet. Vegetation ten days later than usual.

Independence, Iowa.—May 29—Plum trees in blossom; last year they were in full bloom on the 11th. Very nearly all vegetation is two or three weeks later than usual.

Iowa Falls, Iowa.—Frost on thirteen mornings in May, the most ever seen by this observer.

Fort Madison, Iowa.—This was the coldest May since the observer commenced a record, in 1848.

Dubuque, Iowa.—May 24.—At 4.30 p. m. a violent hail storm passed a few miles to the north of this place, from west to east, covering the ground in some places to the depth of four inches with hail stones, some of which were an inch and a half in diameter.

Lawrence, Kansas.—May 6.—Heavy frost on the bottom lands this morning. 13th.—A violent gale suddenly came up from the northwest about 2 a. m., and lasted till day-light.

Atchison, Kansas.—May 6.—White frost covered the ground this morning; vegetation injured only on the low lands. 23d.—White frost on the low lands this morning.

De Soto, Nebraska.—May 31.—The month has been too wet for corn; some farmers have been obliged to replant.

Glendale, Nebraska.—This has been the coldest and wettest May for ten years.